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Issue 155
February 2016

The magazine for producers, engineers and recording musicians

STUDIO 2016!

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MusicTech Expert Panel



Studio Hardware John Pickford
A studio engineer for over 25 years, John's a keen sound recording historian who has a passion for valve-driven analogue equipment and classic recording techniques.



Mixing/Mastering/Logic Mark Cousins
Mark specialises in sound design and cinematic productions. He's recorded with orchestras across Europe and is heavily involved in soundtrack composition.



Careers Editor Rob Boffard
A sound designer with a background in TV and radio work, Mark's a Reason evangelist and – when he isn't writing for *MusicTech* – releases hip-hop music under the name Rob One.



Digital/Composition Andy Price
With a Masters in songwriting and a vast interest in music history and recording techniques, Andy works daily on MusicTech.net and regularly contributing to the magazine. He's currently heading up our *Landmark Album* features and songwriting/Cubase series.



Recording & Guitar Tech Huw Price
A recording engineer since 1987, Huw has worked with the likes of David Bowie, My Bloody Valentine, Primal Scream, Depeche Mode, Nick Cave, Heidi Berry and Fad Gadget.



Scoring/Orchestral Keith Gemmell
Keith specialises in areas where traditional music-making meets music technology, including orchestral and jazz sample libraries, acoustic virtual instruments and notation software.



Ableton Live Martin Delaney
Martin was one of the first UK Ableton-Certified Trainers. He's taught everyone from musicians to psychiatric patients and written three books about Live. Martin also designed the Kenton Killamix Mini USB MIDI controller and is now the editor of www.ableton-live-expert.com.



Reason, DJ & Mobile Hollin Jones
In addition to teaching music technology, and producing / writing soundtracks, Hollin is an expert on everything Apple –mobile or computer-related – and an accomplished keyboard player.



Electronic Music Alex Holmes
Alex has been a computer musician for 15 years, having a keen passion for beats, bass and all forms of electronic music. He's currently involved in three different dance music projects.



Pro Tools Mike Hillier
Mike spent five years at Metropolis Studios, working alongside some of the best-known mix and mastering engineers in the world. He now works out of his own studio in London.

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I could say 'Happy new gear!', as the start of the year is not only, well, *the start of the year*, it's also quite literally when the new music gear releases happen at the NAMM show in Los Angeles (it's actually down the freeway at the Anaheim Convention Centre – think Birmingham NEC, but hot – but we like to say 'LA', as it sounds flasher). Such is the stuff of magazines, the show has not happened as I write this, but I've rounded up what we know, starting on p6, for our Studio 2016 special.

Also included in this is **ROLI**, the new(ish) London-based music tech innovator responsible for some of the most groundbreaking releases of the last year (and the next, by all accounts). We recently visited the company's HQ to find an outfit on the cusp of taking great strides into the future of music production and – with one or two neat acquisitions on the way – one that will be involved with *your* music production (whether you like it or not!). It is certainly one to watch in the coming year, as you'll realise with our exclusive interview with the company founder Roland Lamb (p8 onwards).

Finally, what a way to kick off Studio 2016! We have a stonker of a review of the new **Akai MPC Touch**, a product that takes at least four trends – multi-use integration, downloadable content, a more computer-less angle and touch control – and squeezes them into a box for less than 500 sheets.

If that lot doesn't point to an exciting 2016, I don't know what will. Have a great month and enjoy the NAMM news as it happens at **www.musictech.net**.

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STUDIO 2016 THE LATEST NEWS FROM NAMM

NAMM is the big US show where most of the new gear announcements for the year are made. Here's what we know so far...

NAMM is *the* music technology event to attend and the chances are we are there as you read this. We've managed to gather some of the big stories ahead of the show to assemble here but, inevitably, due to the odd embargo we've been unable to print some. We weren't, for example, able to tell you about one particular **Korg** release that we do know about, with (apparently!) something special from **Yamaha** too, so head on over to **www.musictech.net** for some ultra-special and up-to-date NAMM coverage and be sure to check the *MT* editor's daily round-ups from 20-23 January.

Name Allen & Heath ZED 10i-10 Series
What are they? Compact mixers/interfaces
Features 4x4 USB multitrack interface for Mac or PC or an iOS device (using a camera connection kit). Four mono channels with XLR and TRS jacks, one stereo channel and a second stereo input for returns or playback. Bundled with Cubase LE.
They say *"The perfect choice for musicians and venues looking for a quality, small-format mixer that can deliver the goods for both live performance and multitrack recording. High-quality USB interface, handy guitar DIs, great-sounding mic pres and ZEDi-10FX's exceptional FX library."*
Price £199-£249
Web www.allen-heath.com



Name Celemony Melodyne 4
What is it? Update to the revolutionary audio processing plug-in. This really did change the game, as Melodyne allows you to change the pitch of a recording within a mix with ease and accuracy; so if you have a duff vocal or bass recording, for example, just correct it.
Features The Sound Editor, with totally new sound design possibilities, DNA Direct Note Access on an unlimited number of tracks and ultra-accurate tempo detection.
They say *"This constitutes the most extensive update to the entire product family in the company's history, with the emphasis on Melodyne 4 Studio. Melodyne is, at once, an outstanding piece of software and the industry standard. The sound quality of the edited audio and the ability to modify notes, even in polyphonic recordings, have turned Melodyne into a must-have tool."*
Price Melodyne 4 Studio is €699, update is €149
Web www.celemony.com



Name IK Multimedia iRig BlueTurn
What it is? A page turner. Yes, a page turner
Features That moment classical musicians probably dread: how to turn a page of score. Well here's a solution, albeit not one for real paper but one that looks like a handy solution if you read your score on an iPhone, iPad, Mac or Android. Basically, you use the backlit buttons to step through whatever you are reading via Bluetooth, and that is pretty much it. Simple and probably very effective.
They say *"iRig BlueTurn is a Bluetooth page turner with backlit pads that lets you easily turn pages and scroll through material hands-free. You'll be ready to perform at your best, no matter whether you're conducting an orchestra, playing music from a score, shredding through some guitar or bass tabs, giving a major presentation, lecturing or making a speech. With iRig BlueTurn, it's your turn."* See what they did there?
Price €85.39
Web www.ikmultimedia.com



Name Impact Soundworks Peak Rider
What is it? Creative Dynamic Processor
Features Extreme mix plug-in that analyses the peaks of a sidechain signal and generates a new envelope in real-time for a main input. This allows the main input to 'ride' the sidechain with no latency and sample-accurate precision.
They say *"With Peak Rider, there are many creative possibilities: taking a flat, lifeless bass part and matching it to a drum groove, restoring dynamics to an over-compressed or distorted track, matching harmony vocals to a lead, creating a rhythmic pattern in a pad sound, fattening instruments while preserving dynamic range, and much more."*
Price $79 (intro price, normally $99)
Web http://impactsoundworks.com



Name MXL Heritage Edition Mics
What is it? New range based on classic studio mics
Features Genesis-HE valve mic, Genesis FET-HE solid state condenser, V67g large capsule condenser, V69m dual triode valve mic, and R144 ribbon mic.
They say *"You've made these our most popular models, now we present them in their finest package."*
Price from £129 upwards
Web www.mxlmics.com

Name PowerFX Vocaloid Ruby
What is it? A new vocal bank based on Vocaloid 4, Yamaha's vocal emulation platform

Features Updated pronunciation and articulation to include all new phonetic capabilities previously unseen and unheard in English Vocaloids. Ruby also takes advantage of the new developments in Vocaloid 4 with improved dynamic capabilities and a brand-new growling function.
What they say *"Ruby is a youthful female vocalist with a smooth, joyful-sounding tone of voice. Capable of singing in a wide range of musical styles from soft ballads to more upbeat dance/house tracks, Ruby is a fine example of how far English Vocaloid technology has come since its humble beginnings."*
Price Vocaloid 4 editor: £99, Ruby £99.95; bundle deal £159.
Web powerfx.com

Name Presonus Digimax DP88
What is it? Mic pre and ADA convertor
Features Digitally controlled, analogue preamps and digital conversion up to 96 kHz. Equipped with 'audiophile-grade', Burr-Brown processors to deliver 'top-quality' digital conversion up to 96 kHz.
They say *"DigiMax-series preamp/converters have been relied on in countless recording studios worldwide. The DP88 is the latest innovation in the DigiMax line,and provides the connectivity, flexibility and professional sound quality to make it a perfect fit in any studio environment."*



Price £599
Web www.presonus.com

Name Prism Sound Callia
What is it? USB UAC2-compliant preamp and soundcard
Features: Balanced +14dBu XLR and unbalanced 2V Phono outputs, Sampling rates from 44.1kHz to 384kHz, S/P-DIF inputs on optical and co-axial interfaces, USB 2 and 3 compatible
They say *"Callia is great for listening on a good-quality speaker system or on good-quality headphones. With a low 4-ohm output impedance, Callia can drive a wide range of headphones with excellent frequency response accuracy often sacrificed in standard 100-ohm headphone outputs."*
Price TBA
Web www.prismsound.com

Name ROLI Seaboard RISE 49
What is it? A 49-key version of the award-winning and groundbreaking RISE keyboard
Features We're on a bit of a ROLI tip this month, with an interview with the CEO of this groundbreaking music technology company over the page. Following the release of the NOISE app for iPhone 6 – download it now – which highlights the benefits of the RISE multidimensional keyboard, ROLI has just announced this, the RISE 49. It's obviously a bigger version of the keyboard we reviewed a few issues back (9/10. MT Innovation Award) and features the amazing Equator soft synth, which really does show off the benefits of all of those dimensions of touch.
What they say Probably easier to say what we said of the 25-note version: *"We didn't expect to be quite so impressed as we are. It's a new piece of hardware that will expand your performance and recording creativity. It looks stunning, and with Equator thrown in, can sound that way too..."*
Price TBA
Web www.roli.com



Name Sonnox Oxford Envolution
What is it? "A frequency-dependent envelope shaper with separate transient and sustain sections to radically reshape the envelope of your instruments or audio."
Features Pro Tools AAX DSP, Native, VST and AU plug-in with frequency-dependent control of transients & sustain; tilt/parametric targeting of frequencies to process; DIFF button to solo the effect; warmth control for saturation.



What They say *"Insert on a track, bus or even master output to add presence/distance to drums, piano, guitar and any other percussive content. Boost sustain to make the ambience around a recording bloom, or cut it for quick and precise gating. We love the more creative and extreme side of the plug-in, too; like using the DIFF button to generate negative ratio compression effects!"*
Price £170-£275
Web www.sonnoxplugins.com

Name Waves Greg Wells PianoCentric
What is it? Piano mixing plug-in
Features Created with producer, songwriter and mix engineer Greg Wells (Adele, Katy Perry, OneRepublic) with diverse results ranging from rich tones to lo-fi processing.



They say *"I wish every studio I've ever worked in had this," says Greg Wells. "The piano is a difficult instrument to record and an even harder one to make sit in the mix properly. Under the hood of the PianoCentric plugin is every technique I've learned over the years for how to make piano sound amazing in the studio."*
Price $149
Web www.waves.com MT

RELEASE ROUND-UP

MusicTech writers **Mike Hillier** and **John Pickford** reveal a few treats for 2016...

Chandler Ltd. will capitalise on the success of its award-winning REDD.47 Preamp with more valve-driven gear based upon EMI equipment originally used in Abbey Road studios during the 1960s. **Golden Age Project** will expand its range to include some vintage-style compressors to join their Neve-inspired mic preamps. Expect an 1176-type limiter, as well as replicas of the classic tube-powered LA-2A and solid state LA-3A. A little bird tells me that **Thermionic Culture** will replace its unusually sized Freebird EQ with a more conventionally styled rackmount unit named The Swift.

Dave Derr (**Empirical Labs**) has revealed he's working on an official Distressor plug-in. Unlike the Fatso plug-in, this won't be a UAD emulation, but a native plug-in. Given the popularity of the hardware unit and the lack of any good emulations yet, this is sure to be a hit. But will this be the start of a new range from Empirical Labs or just a one-off?

Fresh from successfully converting its plug-in range to a series of Eurorack modules, **Audio Damage** is set to release a range of standalone effects pedals – expect chorus, fuzz and some very creative delays.



Roland Lamb at ROLI's headquarters in London

IT'S THE WAY WE ROLI

ROLI invented a new kind of keyboard with the Seaboard and its recent acquisition of the JUCE software platform could create even bigger waves in music production. *MusicTech* meets the most important company in music technology right now...

Shoreditch has become the creative hub of London, arguably the UK, with some of music production's top outfits located there including Point Blank, SAE London and Native Instruments. Now the new boys of music tech are there, and they're making a lot of NOISE...

ROLI makes the Seaboard range of keyboards with completely new dimensions of expressive playing and sound mangling. The company has also just released NOISE, an app that allows anyone with an iPhone 6 to experience the Seaboard for free. Yes, it's an advert for the keyboard, but you won't find this level of fun and creativity in any other app, let alone one that is free. Got a 6? Download it now.

ROLI also has a working environment that encourages creativity and the kind of 21st century philosophy and strategy that you'd imagine is straight out of Google and the coolest of Seattle-based start-ups. This company ethos is no surprise, as ROLI founder, New Hampshire-born Roland Lamb, has the kind of background and upbringing that sewed the seeds of this creativity. It started with home schooling by his artist parents, took in the famous alternative 'free' Summerhill school in the UK and ended with studying classical Chinese and Sanskrit philosophy at Harvard and a PhD in design at the Royal College of Art. Add in a stint at a Zen monastery in Japan and you can understand why working at ROLI – as we found on a recent visit there – is more akin to working at the cutting-edge research department of a creative university rather than your regular nine to five...

You'd be forgiven for thinking that this could all be hot air with little in the way of results, but ROLI has entered the competitive music technology market with some gusto.

You'll have seen the results: those distinctive Seaboard keyboards have a look straight out of the future and a feel to match. While you can play the Seaboard range like regular

keyboards, you can also stroke them, wobble them, strike, feel and interact with them to create new ways of playing.

The Seaboard GRAND was the company's opening salvo, a larger keyboard with 61 keys, or Keywaves, that costs £2,499 upwards. The RISE, though, is where ROLI is currently at. And by that we mean that this is the product that should bring the musicians to the ROLI party. It's an incredible piece of technology that does everything its older and bigger brother does and a bit more. It comes bundled with the brilliant Equator synth and is priced to make (key) waves. As we said when we reviewed it: "It's £599 for a new piece of smooth tech – and with Equator thrown in, that makes it a great buy. And for sticking its neck on the line to produce a brand new piece of hardware that's totally unlike anything else out there? Well, ROLI can only be applauded."

So ROLI's hardware and software could be your future, but the company's acquisition of JUCE and Blend.io makes it your present. JUCE is the software development tool used by industry big shots like NI, and Blend is a collaboration platform compatible with more than a dozen DAWs. As you can see, then, there's a big chance your music-making future will be somehow entwined with ROLI's. The company has the instruments, the tools and the platforms for music production, and its CEO has some interesting views that he shares here in this exclusive interview...

There's a big chance your **music-making future** will be **entwined with ROLI's**

MusicTech: Tell us a little about your own background...
Roland Lamb: I'm motivated by the goal of creating joy. We live in a time where our relationship with technology is subject to constant redefinition. How will we engage with our tools and physical and digital extensions in the future? The answer is that it is almost completely up for grabs, and innovative companies will play a huge role. My passion lies in redefining the relationship between humans and computers in ways that expand interaction.

MT: What was your impression of the studio industry?
RH: I've always had a love-hate relationship with music, studio and performance technology. Music making is one of my passions, but I've always been more of an 'eyes-closed' performer than a technologist. I love the feeling of physical connection that comes from experiencing expressive touch and sound in real time. The electronic technologies had enormous benefits, offering huge versatility, incredible sound palettes, and new and more accessible ways to create music, but they all lacked the fundamental expressive connection between the tactile and the sonic, which has always been at the heart of music making. So I invented the Seaboard and founded ROLI to address that and bring the minimal magic of a Steinway grand piano or a Stradivarius to electronic music.

MT: What did you want to achieve initially?
RH: I think there is a huge latent interest for music and music making, and so many people I meet say they want to play an instrument but maybe it's too expensive, or too difficult. But I think about the analogy between music making and photography. 20 years ago, they were equally difficult and expensive to do. Photography has now been totally transformed and you can take and publish a photo to a very high standard in less than a minute. In 2016, more photos will be taken than during the whole history of photography because so many more people can enjoy it. Music hasn't seen the same radical transformation and I think there's a big opportunity within it right now.

On a personal level, there was a gap in my musical experience and that was enough at the beginning. I wasn't particularly interested in business then, really just in philosophy, invention and design, but I soon found that business is wonderful context for innovation, and turning my own excitement about transforming music making into a shared journey of co-creation.

With the Seaboard, I wanted it to realise its full potential as a new instrument. I thought about trying to license the idea to another company but worked out that to establish a new future for the keyboard would be a long journey of creation. Indeed, we received our first investment in 2012 and I think we are still only about 10% of the way towards realising the full potential of the Seaboard, and the Seaboard is just the very beginning of what we will build.

MT: Did you have a plan of releases from the start?
RH: To start with, everything came from the Seaboard GRAND. Before we built the first prototype, it became clear that we would need a multidimensional sound engine, like Equator. Indeed, most of the core ideas for our current and many of our future products were established years ago as a direct result of working out the implications of what it would mean to fully establish the Seaboard as a new way of making music. These ideas have been refined, and focusing on continuous innovation keeps us open to the unknown.

MT: Were you pleased with the impact the GRAND made?
RH: I've been thrilled. It's a very powerful instrument with a classic design that I think will stand the test of time. It was so →



Roland with ROLI's first release, the GRAND

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"To call the LCD-Xs good would be an understatement on a par with describing the Beatles as popular, or Picasso as handy with a paintbrush. Because they're not good. They're amazing... Simply the best-sounding headphones I have ever heard, with incredible musical dynamics and a remarkably neutral frequency response." - Sam Inglis - Sound On Sound - October 2015

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The FWX99 audio PC is our high end studio solution for artists who find themselves really pushing the limits. Designed initially as the ideal solution for artists working with large sound banks and processor hungry plug ins, this base system with the 5820K CPU solution offers up 6 cores of processing power with hyper threading giving a total of 12 logical cores to drive your software. The is the also the additional option to upgrade this CPU to an i7 octo-core solution, which can offer up to another 40% performance in real world usage and is quite possibly the most powerful single processor option currently available. As with all of our audio production PC systems, noise levels are kept low and unobtrusive thanks to careful component choices, which include large and slow fans on the case, cooler and PSU options. These are all carefully chosen to ensure the maximum cooling with the minimum amount of noise, ensuring high performance and the minimum amount of disruption to your working environment. This model also offers the ability to add in both Firewire and Thunderbolt support through additional add in cards, ensuring that no matter what you choice of interface this system is a perfect match to be the heart of your studio both for now and many years to come.

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new that we didn't quite know what to expect. It is being used all over the world in a wide variety of contexts and has been recognised as a design milestone that truly extends the possibilities of the piano keyboard, itself one of the greatest musical interfaces of all time. Moreover, it has helped us build a foundation as a new kind of music company. And, finally, I've been particularly pleased that the GRAND was able to help us play a key role in establishing MPE, a new way of implementing MIDI that is already creating much wider compatibility among a huge range of multidimensional software and hardware products.

MT: The Seaboard RISE is clearly more 'mass market'…
RH: It is for anyone interested in new ways of making music. It's particularly focused towards acoustic musicians who would like to lean towards the electronic, and electronic musicians who would like to add more expressive depth, and innovators who straddle those two worlds. It is universal, like a piano keyboard, and we're finding that it is being used across every genre of music by all kinds of music makers, composers, producers and performers. In particular, I think there are a lot of people who have a MIDI keyboard controller around, and are frankly a little tired with what they offer, and welcome the opportunity to play with something really fresh and new. And for producers, the ability to control as many parameters as they want in real time through our 5D touch technology can dramatically speed up workflows.

MT: We loved the RISE but we found that we really had to get hands-on with it to realise its full potential…
RH: Thank you! And, yes, you do have to experience the Seaboard RISE to fully understand its power. Usually, getting a complex message across involves a mixture of showing and telling. In terms of telling, we've found that the concept of the 5D touch has been invaluable in helping people to understand the Seaboard. As for showing, we're seeing more amazing performances and videos by Seaboard creators that demonstrate the capability of the Seaboard to extend the possibilities of musical expression. For example, AR Rahman and six of his students recently played a medley of cinematic music completely live on seven Seaboards and the music they created has an incredible sonic range – for me, this makes the message of multidimensionality really hit home.

MT: Obviously the NOISE app will also be a part of this…
RH: We're stoked about NOISE and thrilled to see people getting into it right off the bat. NOISE is definitely a great way for people to get a taste of what the five dimensions of touch are all about, but it is also called NOISE because we want to offer people a way to shape a sound with a touch of their fingers and literally just have fun making some noise.

MT: How will we see the app developed?
RH: We have an exciting roadmap ahead. As our software is made with JUCE, our cross-platform C++ coding framework, everything we have built works on every platform. JUCE is used by hundreds of companies, so by acquiring it we became partners with them. Bringing JUCE into the ROLI fold was one of the best things we've done, as we have transformed our software offerings. It's also a huge privilege to work with Jules Storer, the founder of JUCE.

We knew that the key to establishing new instruments was to build great software integrations, not only with our own software, but with a whole ecosystem of tools that musicians know and love. JUCE has been an invaluable tool in establishing such broader compatibility, and is rapidly growing as a product in its own right. We recently launched JUCE 4: Grapefruit JUCE, a powerful new version of JUCE that features an amazing instant compiling engine, and hosted the first annual JUCE summit in London, sponsored by Google and Native Instruments, which brought together over 100 leading audio and music developers from around the world. Watch this space for 2016…

MT: Tell us about some of your broader plans for the future?
RH: We have big plans for continuing the development of the Seaboard GRAND and RISE, our Equator sound engine, NOISE, JUCE and Blend. More broadly, though, we are re-imagining and reshaping the music making process from start to finish, and aiming to reclaim the magic of acoustic instruments in our digital tools in ways that open up every part of the music making process to a much wider public.

MT: What is your goal with both ROLI and beyond?
RH: That's a good question… I want ROLI to be an adventurous organisation that makes a contribution to a more seamlessly connected music making ecosystem, so that if, for example, my son wants music making to be part of his life, he has frictionless, fun, and deeply expressive tools for learning, creating, and sharing music at his fingertips. Beyond that, I hope we find ways to participate in a much larger conversation about how people will shape and relate to their technologies. I want to lean into my weaknesses and blindspots so that my own journey of creation can help me to grow as a human and constantly explore new horizons. MT

THE ROLI HQ

MT: It's a much bigger operation than we expected…
RL: We are just getting started with a lot of growth ahead. The structure is evolving, although I'm really fortunate to work with an incredible interdisciplinary team. We're always looking for imaginative and passionate musicians, makers, coders, engineers, scientists, inventors, designers and storytellers to join our team – a lot of growth comes from the serendipity of a wonderful group of radical individuals coming together around a shared mission.

MT: We were very interested in the working environment and the encouragement of creativity…
RL: I was bringing in institutional elements from a lot of places I experienced in my upbringing – Summerhill when I was a kid or The Royal College Of Art, where there was an incredible creativity among the students. Along the way, I wanted to take the same spirit of exploration and innovation that we have with our products into a working environment. One of these is trying to create a more seamless experience. What is the musician's experience in terms of everything they do? One of the ideas for me is that the model of work/life balance is not attractive. Your life is separate from your work and work is cast as the enemy of life, or at least something that eats into your interests. So pretty early on I wanted to replace the idea of the work/life balance with an idea of professional and personal synergy. If we can build great products and work well with other people you will develop skills that hold you in good stead in other domains of your life, and if we respect those domains people will want to bring some of that into work.


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MT Cover Feature

THE ULTIMATE GUIDE TO REMIXING

Fancy remixing other people's music, or having your own tunes reworked? Here's everything you need to know in the ultimate *MusicTech* guide...

Sitting down with a guitar or a computer and trying to create something from scratch can be one of the hardest things for a musician to do. Everyone has good days, of course, when the music flows easily. Other times though, the pressure we put on ourselves to write music can make things tougher. This isn't as often the case with remixing, that long-established technique of re-interpreting and reworking music made by others to create something new and sometimes even radically different. When you remix, the building blocks are handed to you and it's up to you to turn them into something. In a way, much of the legwork has already been done and all that's left to you is to interpret it in your own style.

This is why remixing is so popular and why some people even prefer it to writing original music – although some remixes depart from their source material so radically that they could arguably be described as new compositions. As well as being great fun, some remixes even end up being more commercially successful than the original song.

Starting the remix

You might tentatively suggest that bands playing covers of other bands' songs were the original remixers, but it wasn't until the advent of electronic music that the concept of the remix properly entered popular consciousness. True, early hip hop sampled a lot of funk and disco records, and dub music in the 1970s blended a lot of instrumentals with new vocals, but that wasn't quite the same thing. Official remixes really started to appear in the 1980s along with the rise of MIDI-capable equipment, early sequencers and 4/4 dance beats. These factors made syncing elements of different tracks together much simpler, and so remixing grew in popularity.

As the 90s gave way to the 2000s, computers and DAWs were becoming more powerful than anyone could have imagined in the 1980s. As it turns out, these are the perfect tools for remixing. There's no loss of quality when swapping digital files, everything can be synced precisely, and virtual instruments mean a much wider sonic palette than had ever been possible before. With the rise of the internet, remixing was no longer even constrained by where you lived. It became big business, not just in the dance world but in pop too.

Getting remixes of a track can be a great way not just to pad out a single release but also to broaden the appeal of your music, to take a great acoustic song and translate it to the dancefloor, for example. If you are a remixer, re-imagining the tracks of other artists gives you great creative freedom and also the possibility of a payday if things go well. Remember, remixing doesn't necessarily just mean sticking a 4/4 dance thud under something, even if that's still common. With the tools available to you in almost any DAW, the sky is the limit when it comes to reworking tracks for a remix. We'll show you how it all works over the following pages...

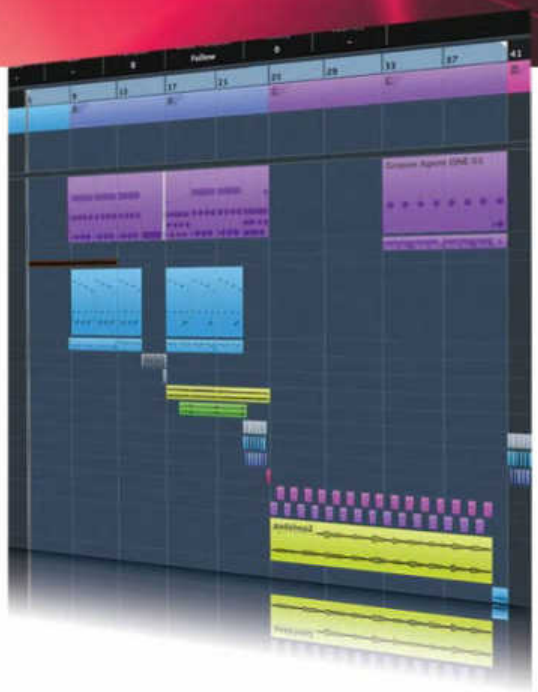
PREPARING FOR A REMIX

Whether you're handing over your stems or receiving material for a remix, here's what you'll need to do.

The ground rules for sending or receiving material for a remix are really two sides of the same coin, and rooted in basic good practice for producing music in general. They begin with the really core stuff like setting a project folder for your material, knowing what sample and bit rate your project is going to be at, recording to a click track, and setting markers correctly when exporting. Computer-based recording and DAWs make both ends of the remix process considerably easier than it would once have been, but you can help yourself by following the correct procedures.

Getting started

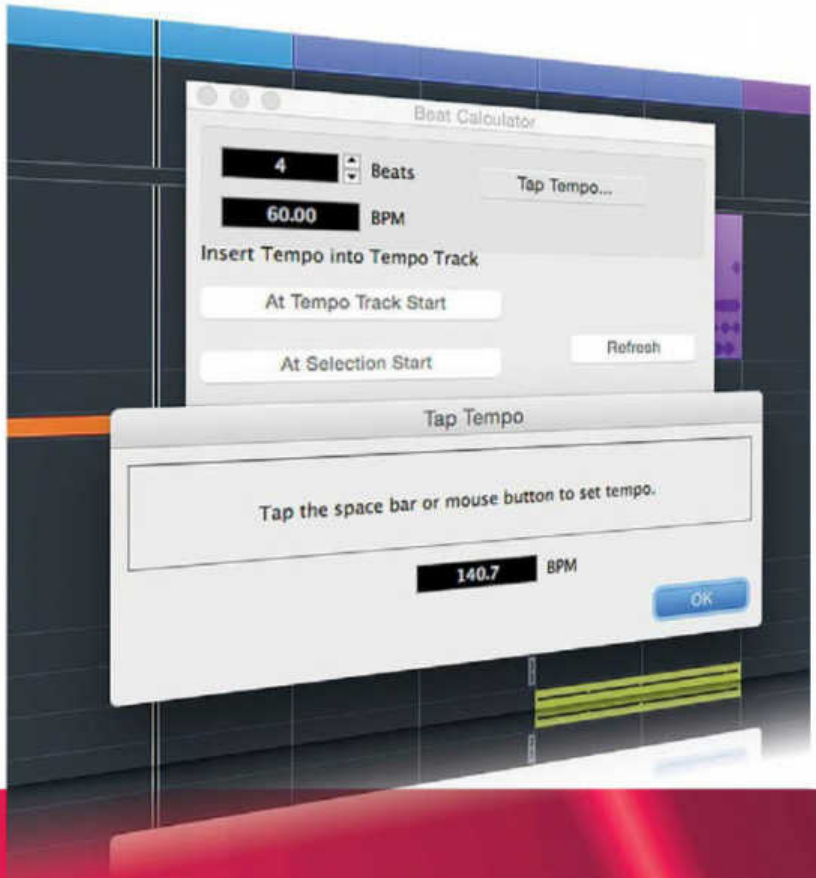
Let's begin with a look at how you ought to be working if you are planning on having a track remixed after you have finished it. Actually, you should always work to these rules because you never know if you might need something reworking or changing down the line. While it's possible to remix or overdub a track that's not been recorded to a click, for example, it's far easier if it has been in the first place. This is really the key: make sure you're locked to a click. Having a solid time base is essential both to editing inside your DAW since they all work on a grid system, and to someone else adapting your project to their setup.



Below: A beat calculator can help you sync up stems when you don't have tempo information

Right: Setting the left and right markers with snapping active is essential when exporting stems and importing at the other end

You should always work to these rules – you never know if you might need something reworking later

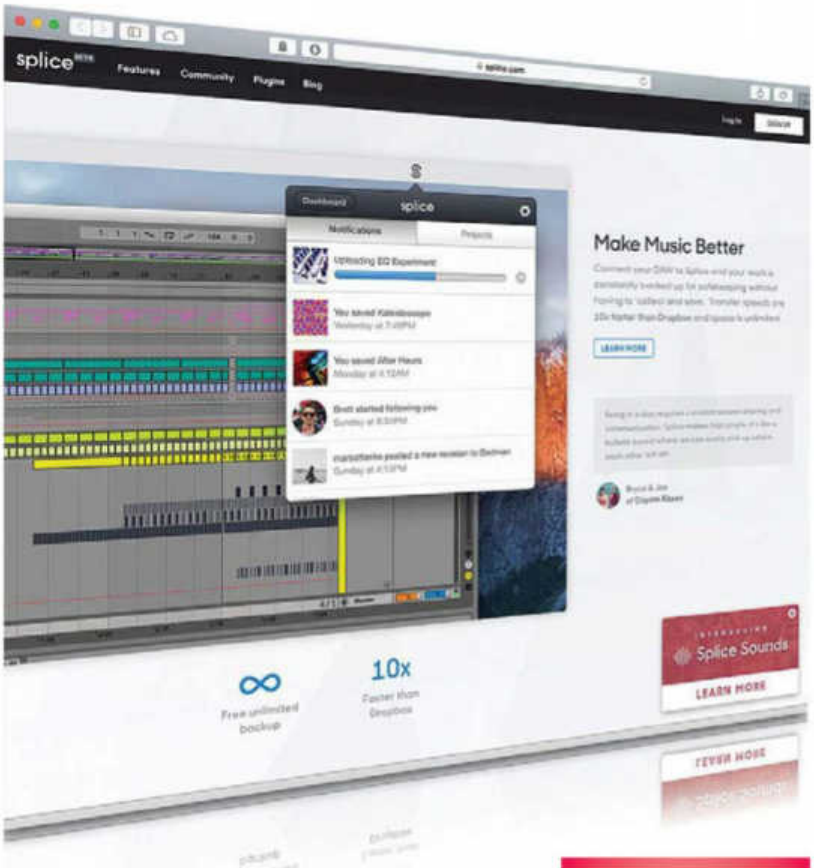


Your tempo doesn't even have to be sensible, it just has to be consistent. Most DAWs will allow a decimal point in the BPM, like 117.6BPM, for example. And while there's no real reason not to go for whole number values most of the time, you can use any tempo as long as you stick to it, make a note of it and tell the remixer so they can set their DAW to the same tempo. The same goes for formats. Pick a setup like 32-bit, 48kHz WAV files for example, and convey this to the remixer. Files can be converted on import but it's better not to have to. In the event that your track contains tempo changes, you'll want to be using a DAW that can export a tempo track or map if the change is gradual, or simply make a note of the tempo changes and where they occur so they can be recreated at the other end.

This assumes that you are both using different DAWs, though you may not be. Indeed if you are both using the latest version of Logic, just as an example, you can send a project folder with a raw project file and audio files. You'll still need to account for any difference in plug-in collections of course, as the likelihood of your having absolutely identical systems is small. In most cases you will be using different DAWs and have different plug-in collections, so it's better to take the 'all in' approach of providing properly formatted material.

Rules for exporting

As the person providing the material for the remix, you have certain responsibilities to make your remixer's life easier. The major one is to export stems in the correct format. Begin by setting the left and right locators precisely over bar markers, either starting at zero bars, 1 bar, 5 bars or wherever as long as it's snapped. If your stems begin at 3.75 bars into a project it's going to take the other guy ages to get everything lined up, and it's an easy mistake to avoid making. If they have project BPM and stems that start on a bar marker, your remixer should be able to import everything easily and have it immediately in sync.



Above: Embrace the new! Use a service like Splice to upload, collaborate and remix tracks.

The easiest approach to exporting stems for remix is to just export every track as a separate, continuous stem. Yes, you might have a horn part that only comes in on the chorus, but trying to cut the stem up can just create confusion. The remixer will be quite capable of chopping that horn part out to move it around if they wish. Working with simple stems, one for each track, is the most straightforward approach.

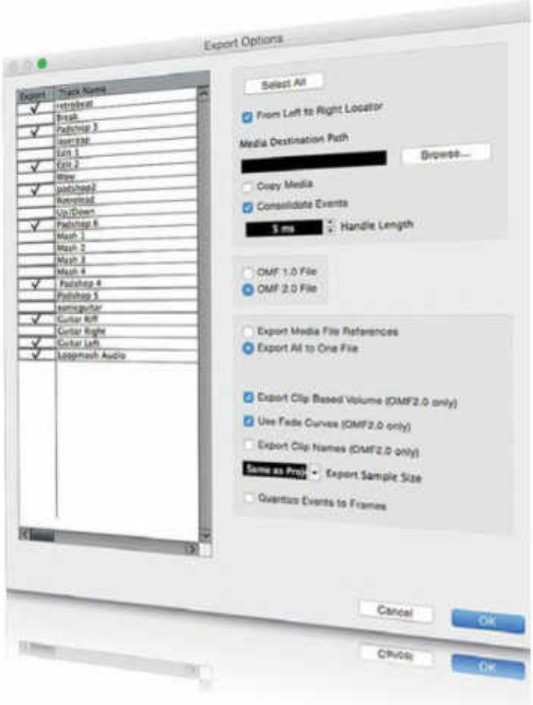
Of course you can export loops and individual MIDI files if you prefer, it'll just take longer than batch exporting. Or, export a bunch of stems and also provide MIDI files, which gives them extra flexibility to rework your parts in MIDI. For the maximum number of options, your DAW might let you export both dry and wet versions of stems, pre and post-fader. Removing your effects processing from one version gives the remixer the choice to use dry or wet stems.

The easiest approach to exporting for a remix is to export each track as a continuous stem

Alternative formats

If you choose to send project data instead of stems, be sure to include all the samples and source audio files. If plug-ins aren't identical between systems, suggest an alternative to re-link to the MIDI tracks or mixer channels. Some DAWs also allow the use of OMF or AAF files for export and import. These are special file formats originally developed for moving between audio and video post production facilities, to cope with the different software in use. They hold certain information about a project like the positions of audio events and clip names, though they're far from comprehensive. These can save you rendering everything out, but are better suited to audio-only projects without tons of special timestretching or automation involved.

A more recent solution is to use a cloud service like www.splice.com to upload and collaborate on raw project data, removing the need to render out. At present this supports FL Studio, Logic Pro X, Ableton Live and GarageBand and it's limited, but definitely one to consider when it comes to sharing your raw material with others for them to work on. There are other online services that let people remix your music with your consent, though they tend not to support really heavyweight project data at the moment, usually just stereo mixes or loops. As things stand you're still as likely to get a DVD or a link to a cloud service to download a few gigabytes of WAV files, hopefully with some tempo information to help you set up correctly.



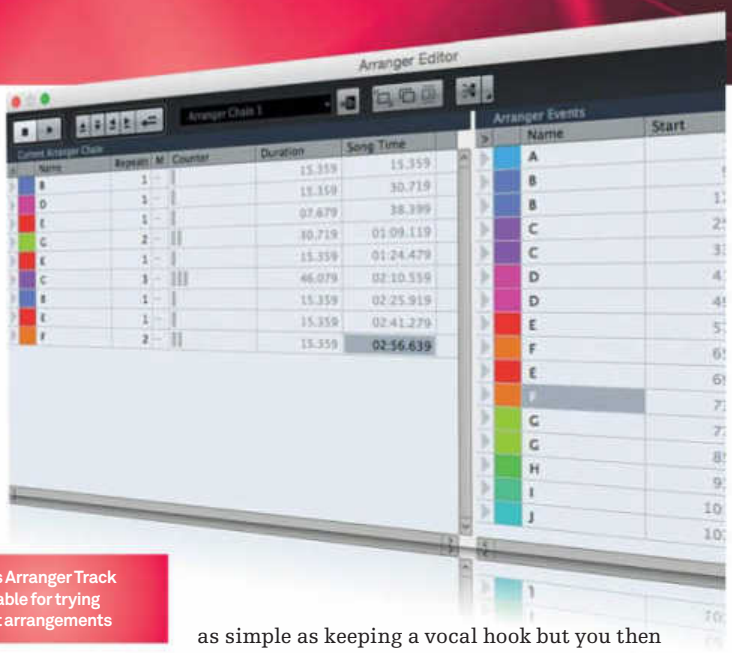
THE OMF STANDARD

The OMF 1.0 format could cope with audio clip position, project tempo and some other basic concepts, and OMF 2.0 added volume settings and fades for events as well as clip names. OMF doesn't support MIDI files (though these can be exported separately) or plug-ins, because DAWs work so differently. As such, OMF is fine for exchanging audio-based projects but certainly has its limits. Most 'full' DAWs support OMF export and import though things like advanced mixer settings, scores, surround and so forth are well beyond the scope of these kinds of file formats. OMF has been succeeded by the AAF format which is more advanced and can include more information but this is currently not as widely supported, though Logic Pro X and Pro Tools among others do support it. There's also the Mxf format for audio and video interchange, though this hasn't made much headway in the audio world yet. Different software supports different formats so it's worth investigating this before you start, as it will save you messing about later.

HOW TO APPROACH A REMIX

Remixing is all about creative decision-making. But how should you go about it?

When you remix music you may be given a brief or you may be left entirely to your own devices. This depends on who you are remixing for and what the goal of the remix is supposed to be. A club remix of a pop song, for example, is likely to need to be heavy on the beats and bass. If you've been commissioned to do one of these, you will have parameters inside which you will be required to work. For a B-side however (more likely to be billed as a bonus track in today's digital world) you may have much more freedom. A remix can be literally anything, but it will usually need to retain at least a small amount of the material from the original track in order to be recognizable as a remix and not a completely new track. This could be as simple as keeping a vocal hook but you then discard everything else. Alternatively, keep most of it but speed it up and add more drums. There are lots of examples of remixes that take wildly differing approaches and still succeed.



Cubase's Arranger Track is invaluable for trying different arrangements

A remix can be anything but will need to retain at least a small amount of the original material

Break it down

A good starting point once you have established any requirements for a remix (like it needing to be a dancefloor filler for example) is to break a track down into its constituent parts. This is why it's so important to provide the component parts of the



Along with the Fat Bustard, this is the **best-sounding analogue summing mixer** we've heard. A world-class product — **John Pickford** *Music Tech Sept 2015*



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AN ELECTRONIC REMIX

How to turn guitar music into EDM

When taking any kind of music and creating a dance version (using the term loosely to mean anything electronic that's destined for a dancefloor) your first port of call is usually replacing or at the very least augmenting the beats with something heavy containing a 4/4 kick. That might sound clichéd but just tune into any commercial radio station and you'll hear that stuff played all day long. Heavy beats are almost a prerequisite, and these can come from a virtual instrument, a loop collection or a hardware drum machine. The importance of having original recordings properly recorded to a click becomes apparent here as you add MIDI parts to real recordings, quantize and program them to fit. From there, you'll probably dial down the guitars and maybe even replace the bassline with something electronic, or dirty up the existing bass parts. Whether or not you lose the guitars depends on you, but it's usually nice to keep a few in there. EDM prioritises beats, vocals and melodic hooks so these are the things you will probably need to keep in the forefront. A load of mushy guitars in the mid range won't be too helpful so strip it back to the hooks and then embellish with electronic elements. It doesn't hurt to juice it up too, maybe adding delays and reverbs and master pretty hot, as is the style in much electronic music.

track as stems or otherwise as separate tracks, because a remixer needs access to everything, not just a stereo mixdown. Different people take different approaches to this. Some artists will concentrate on a vocal as the key element of a track and build a new track around the vocal performance. In the case of instrumental music it might be a bassline, a riff or hook or a drum loop that particularly stands out and forms the cornerstone of the re-imagining. It's usually pretty obvious what the heart of any piece of music is, be it a vocal hook, a guitar lick or something else. In some cases, a remixer will actually add a completely new hook of their own and it's in situations like this that a remix can become more famous than the original.

It's usually pretty obvious what the heart of a track is, be it vocal hook, guitar lick, bassline or loop



Extracting audio to MIDI data is a great way of deconstructing material for a remix and recreating new parts

Modern DAWs let you manipulate time and pitch in incredible ways and these are two important things to think about before you start a remix. Would the track sound better, or at least substantially different, if it were slowed down, sped up or its pitch changed a little? Remember that tempo changes don't automatically also mean pitch changes any more, the two are exclusive. It's often better to make these kinds of choices at the start because it cuts down on the amount of stretching of individual clips and parts that you have to do. So if you've whittled it back to the drums, bass, vocal and one guitar line, perform your stretching on these early on then build the new elements around them.

Creative decisions

Just because you can chuck everything out doesn't mean you necessarily should. Every project is about judgement. Keep what works and replace or remove what doesn't in the context of your interpretation. It might be that a rock track has some synths added to it, perhaps some extra electronic beats and sounds great. Remixing can work the other way as well. Some artists prefer to take away, to strip productions back to their essence and uncover the beauty of a song or the raw power of a groove. It all depends on the ingredients you're working with.

As well as instrumentation the other main consideration is arrangement. Again this can vary from subtle modification to wholesale change. If you're treating a vocal performance as the heart of a track then it's likely that the structure isn't going to change too radically since the vocal has a set length. Of course you can mess with it a little, but it might not be dramatically different in structure. If you disregard the structure of a song or you're making it instrument-led, the rule book goes out of the window. Here, you have carte blanche to start lifting, moving, duplicating and deleting any part of a track.

Many DAWs have tools to help you with this, such as Cubase's Arranger track or Reason's Blocks mode. Others have their own methods for creating multiple arrangements within a project. You don't have to pay attention to traditional song structure, though bear in mind that most people prefer their music to have at least a passing acquaintance with structure so anything too chaotic is going to have a limited audience. Still, you can get away with a lot. Many electronic remixes really push the envelope when it comes to frenetic, cut-up structures. Plug-ins like Stutter Edit or Turnado also mean that really quite complicated mashup effects are easy to achieve without hours of programming.

You have a lot of choices when it comes to arrangement thanks to the flexibility of DAWs. You can reduce a sprawling track down to its core elements and create a tighter, more focused version by trimming the fat. Or, take a simple idea and explode it out into an epic piece of music, adding



Fatboy Slim: artist, DJ, and prolific remixer

and embellishing to create something altogether more majestic. Truthfully, the proliferation of methods by which people consume music these days means that you have more freedom. A 12-minute noise epic isn't likely to make it onto the FM radio, but it could find an audience on Soundcloud or one of the many online radio stations dedicated to niche genres. A club version of an indie song is more likely to find an audience now than when you had to fight for attention on national radio. The possibilities are not quite endless, but they're many.

AN EXPERIMENTAL REMIX

When the going gets weird... do a remix.

Putting a thudding 4/4 beat behind a track is the stereotypical way to remix, and it is indeed still popular. You can go the other way though, taking a song or a track in a completely new and unexpected direction. Some artists specialize in this and while these projects might not get the dancefloor moving, they are often held to have greater artistic merit. You'll start as before by splitting a track into its constituent stems or parts, but this time instead of adding drums you might take them away, or add ominous electronic percussion where before there was a drum kit. Adding textures is a good way to create an atmosphere, and synths and guitars are really great for this. If there's a vocal, consider changing it in some way. Perhaps tempo or pitch stretch it, add vocoding or layer multiple versions of it on itself or add extra harmonies or backing of your own. Ghost a vocal with a distorted guitar or piano part.

While you're being more experimental you can mess with structure more as well. Reverse things, take choruses out and add new sections that weren't present in the original. If you're remixing into a different but more conventional style, give it the full treatment. Add a dubstep underpinning to an acoustic track, or an orchestral backing to a piece of dark electronica. Some of the most interesting re-versions of tracks occur when an artist goes in a completely unexpected direction. There are limits of course, so make sure it works!



REMIXING IN PRACTICE

Here's how to remix in some of the most popular DAWs

When it comes to remixing, your DAW already offers most of the tools you will need. Naturally they all take a slightly different approach but the basics are the same. Set up the project based on the format of the material you have received – for example 120BPM, 48kHz, 24-bit files – and then set the left marker to a definite bar marker, ensuring that snap to bar is switched on. Then import the audio stems all at once, making sure they start at the left marker. If the person supplying the material has done their job you should find that the audio tracks are all in time and perfectly synchronized. That's 'if' they have done their job…

> If the **person supplying the material** has **done their job** then you should find that **the audio tracks are all in time and perfectly synchronized.** That's **'if'…**

If this doesn't happen you might be better off asking for properly exported files. If that's not possible you can expect to have to spend some time looking at waveforms and trying to work out why the timing drifts off as the stems play back. You can use your own click track to work out how badly off the timing is if this happens.

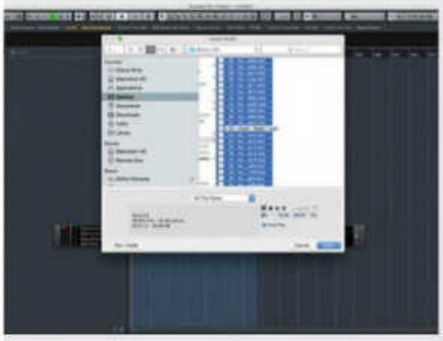
Most DAWs are pretty good with time stretching though it can still be a pain to align entire tracks to your musical grid. In the event that you haven't been told what tempo the stems are at, a beat calculator will usually let you tap the tempo to work it out, though again you'll have to spend time realigning and stretching parts. If things get really fiddly, one trick is to cut parts up and stretch sections individually then reassemble them in the correct tempo, but it's a hassle. Like we say, don't be afraid to ask for what you need…

How you proceed depends on what your aims are for the remix. You may want to, for example, mute everything but the vocal and then bring in completely new beats underneath it to start with. If you're planning to time- or pitch-stretch the vocal track, now is the time to do it to cut down on work later. If you pull a vocal up by 10BPM or a couple of semitones, it will be easier to start building the new track around it from this base rather than changing lots of tempos later.

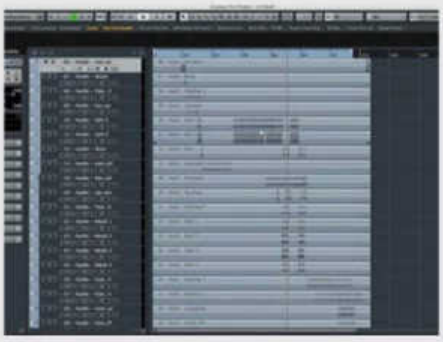
Some DAWs will make life a lot easier even if you do change your mind later. Reason, for example, renders all audio elastic, so tempo changes en masse aren't too arduous.

Much of the time you may want to keep hold of the basic character of the track by keeping certain elements in place such as a bassline, synth or guitar hook if they are particularly good. But you can mess with them for example by adding effects like delay or distortion to alter the feel of the track while maintaining its basic melody. A common technique when producing electronic remixes of rock or indie tracks is to identify the hook and then repeat it creatively. Drums might be replaced or supplemented to beef them up, and arrangements altered to change the structure of the track. Of course you could take the opposite approach and substitute new melodies, beats and basslines and simply keep a few key elements of the original – the choice is yours.

MT Step-by-Step Remixing in Cubase



01 Start a new project and set it up in the Project Setup menu to match the format of the audio stems. Then set the left marker to a bar and choose File > Import Audio File. Navigate to your stems folder.



02 Your stems should import (choose import to multiple tracks) and be in time. The tracks will be named according to their source files. Use the click track to check that sync has been maintained.



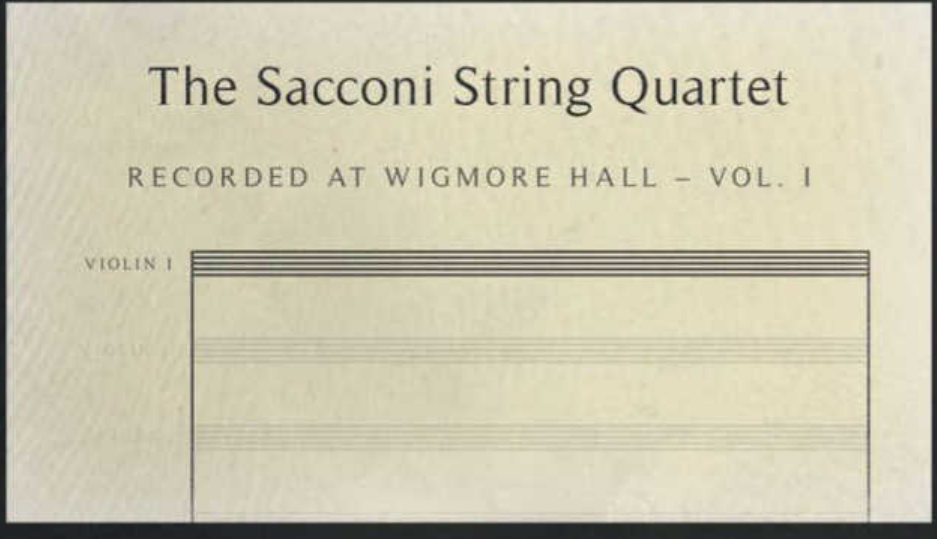
03 Now you can start cutting up audio parts, making sure snapping is switched on to stay in sync. Use Cubase's Pitch and Warp features to manipulate and slice parts to mash them up. Loopmash is a great bundled plug-in for remixing in Cubase.

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MT Step-by-Step Remixing in Reason



01 Import your stems into a blank Reason project and the software will create Rack and sequencer tracks for each one. Reason makes all audio elastic so you can change the project tempo and all the tracks will automatically adjust speed but not pitch.



02 Mute the existing beats and then locate the vocal take. Try adding a new beat to the project by dragging a Dr Octo REX in and copying its loops to the track. Give the song a new feel by taking a different approach with the new beats.



03 Double click an audio clip and enter edit mode. Cut a section of the clip to define it and then note the slice markers. Right click and from the Bounce menu, choose to bounce to a REX loop. This lets you cut up any existing audio in a REX module for greater flexibility.

MT Step-by-Step Remixing in Logic



01 With your stems imported, double click on a loop or a section of audio that you want to edit. In the audio editor window, activate Flex and choose a flex type based on the character of the audio. You can now manipulate it easily.

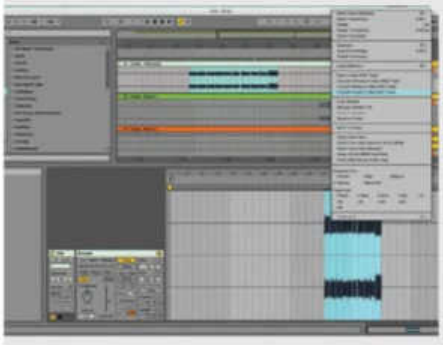


02 Use the split command with snapping activated to cut up material on the timeline and create an alternative arrangement. If you have been sent MIDI files, reassign these to trigger new instruments and edit the MIDI notes to create new parts.



03 You can use Logic's Drummer Track to add new beats to a project and it will more or less handle the timing for you. It's a quick way to create organic rhythms that aren't based on sampled loops and can be creatively programmed.

MT Step-by-Step Remixing in Live



01 Ableton Live takes a slightly different approach and one that's useful for remixers. Here, some stems have been imported and then a loop identified. Right clicking, we are able to slice it to a new MIDI track and then trigger it as a new instrument.



02 Add a new bass instrument and either use the extracted MIDI information from the bass clip imported previously or program a new part. Use Clip view to work with audio and MIDI clips for a more DJ-style approach to remixing.



03 Use Live's great MIDI effects like arpeggiators and randomizers to help you compose new clips and parts underneath the bones of the project you have kept from the original, to make something new and unique.

MASHUP TOOLS

Modern tools can take a lot of the legwork out of the remix process...

When remixes first became a popular thing to do in music, the tools on offer were significantly less advanced than they are today. The process would involve editing tape, sampling into hardware samplers and manipulating the results, and recording overdubs largely using real or hardware electronic instruments. Even when more outlandish stuff became popular in the electronic world, a lot of it was down to many hours spent programming and automating MIDI to get the desired effects.

These days, a relatively small outlay will get you access to some mind blowing software tools for reinterpreting digital audio in ways which didn't really used to be possible. Plug-ins can now take a real-time audio signal and mangle it in amazing ways without you ever having to worry about tedious stuff like staying in sync. Most of this even remains virtual if you so choose, meaning you don't even have to render effects down if you don't want to.



Sugar Bytes' Turnado is a powerful mashup multi-effect

Mash it up

Let's look at a few of the best plug-ins for remixing, beyond the kinds of mix tools you would use as part of any music project. Izotope's Breaktweaker was designed in collaboration with electronic producer BT and is technically a virtual instrument into which you can load any samples and completely

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re-sequence them based on its advanced onboard sequencer. Although billed as a beat making tool, in practice it can be used on anything you like. It has a MicroEdit Engine that lets you repeat or chop up any audio slice at an incredibly fine resolution so you can turn beats into melodic notes, texturize melodic sounds with rhythms or use beats as a synthesis tool by locking drum hits to individual pitches. Different internal sequencer tracks can use different tempo and step lengths so it's almost like a mashup studio inside a single instrument. Manipulating samples becomes far more flexible than anything you can achieve with regular audio edits.

Also from Izotope is Stutter Edit, an audio effect that lets you play effects like an instrument. It continuously samples live audio input into a buffer and then you use MIDI notes to trigger multiple sets of complex effects on that audio. The result is that you can create incredible stutters, runs, sweeps, repeats and much more by assigning notes to effects and then tweaking the behaviour of those effects. There are a stack of available effects and even though you'll want to invest a little time in setting it up to your liking, it's like a remix in a box. Not dissimilar is Sugar Bytes' Turnado, a multi effect that's a little more approachable and has a ton of multi fx to route your sounds through. It can do everything from slicing to distortion and filtering at the same time. To add a new dimension to your remixes it never hurts to have a good pool of samples and loops to work with such as those from Loopmasters. As well as being used straight out of the box these can be mashed up in effects like the ones mentioned above for cool results.

MT Step-by-Step Creating new beats with Izotope Breaktweaker



01 Load an instance of Breaktweaker and load a preset. Each of the lanes represents a different sound and these can be swapped for different samples or some of your own sounds. Press a MIDI note to trigger the sequence.



02 Select any of the note events in the sequencer or add your own using the mouse, and change its position and duration. Click in the MicroEdit window and drag the mouse up or down to change the tension and behaviour of the step for cool sounding results.



03 Use the Pattern section at the bottom right to build up a series of different patterns. These can be sequenced in the main DAW sequencer or exported or bounced down to audio in order to play with them in the context of the main remix project.

RELEASING AND HOSTING YOUR REMIXES

Now it's time to get your remixes heard...

The days of sending material to the CD pressing plant are more or less gone. Nowadays you're much more likely to simply send someone a WAV of a mixed and mastered remix once it's done, and they will deal with releasing it if that's the arrangement you have made. If you are releasing or hosting stuff yourself you have several options, but there are some things to be aware of first. If yours is an official remix, the person whose track you have remixed will own the copyright in at least part, if not all, of the recording. They will probably have written the track and will have the rights to the name, melody and any recorded material they supplied to you. So it's vital to be clear (preferably before you even start any work) about what the deal will be for the finished track. Maybe you will receive a fixed fee to sign over the rights to the remix entirely, or perhaps there will be a cut of sales that can be attributed to you via your membership of a collection agency like the PRS, MCPS, ASCAP or whatever your national association is. If the track contains any third party samples you need to know that the artist has cleared those too, since that adds another layer of complexity. What you shouldn't do is just start selling something yourself, unless you have explicitly agreed this first.

> The **person whose track you remixed** will probably **own the copyright of the recording**

Look to the cloud

Hosting music nowadays is easier than ever, and Soundcloud is still the go-to destination for uploading your own music and embedding it on other sites. Mixcloud is great too, especially for remixes. Bandcamp is still one of the best ways to sell your own music and set your own price, with all



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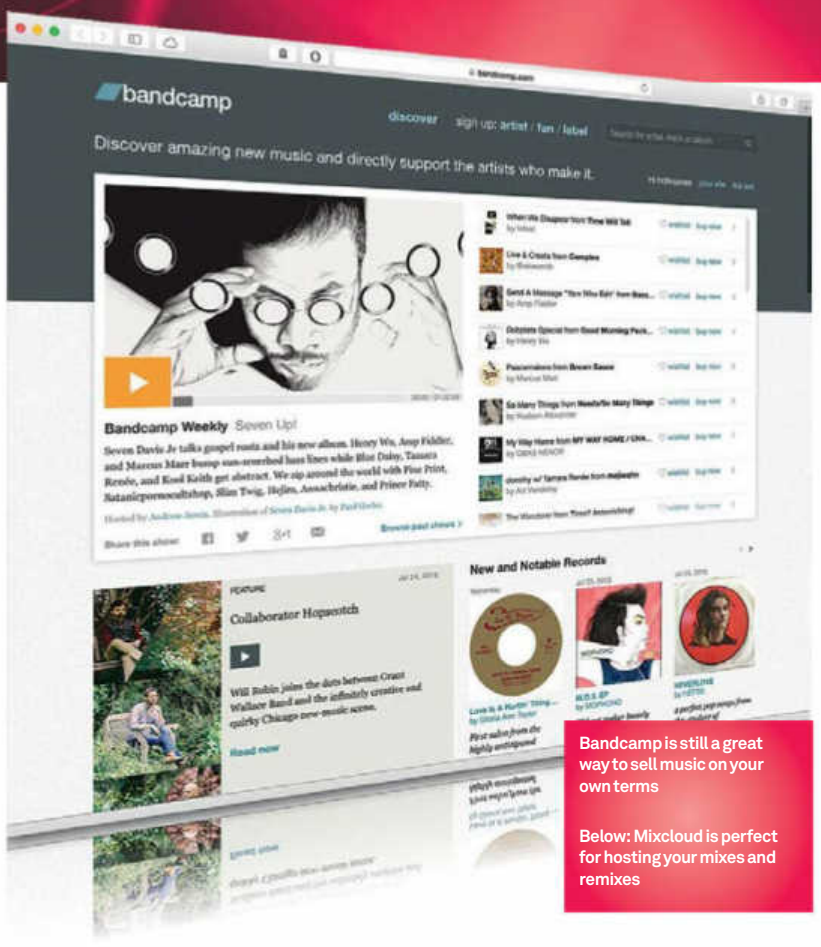
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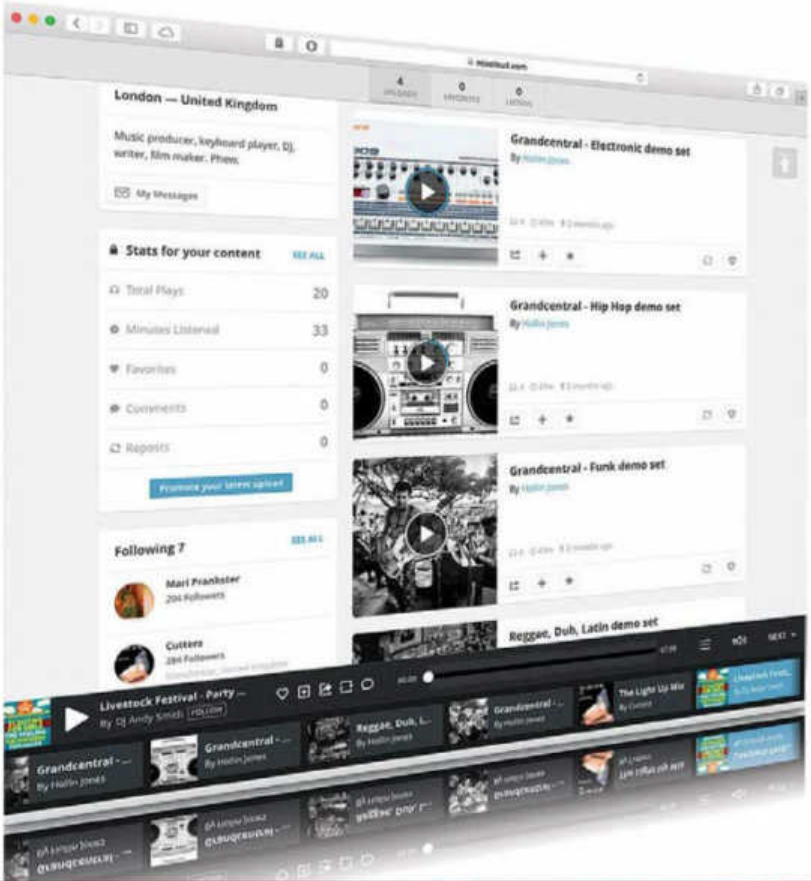
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Bandcamp is still a great way to sell music on your own terms

Below: Mixcloud is perfect for hosting your mixes and remixes

Ultimately **remixing can be a good way** to **promote both you** and the **artist you have remixed**



TECH TERMS

• STEMS
Individually exported audio files that collectively contain all the material in a project. Batch export is the quickest way of creating all of these in one go.

• TEMPO MAP
A special file or MIDI data you can export to tell the remixer about any speed changes that happen through the course of a track.

• BOUNCING
Rendering MIDI or audio down to audio files, often with effects. This provides the remixer with all relevant material even if they are running a different system.

• EXTRACT TO MIDI
Many DAWs let you analyse audio clips and convert their note and pitch info to MIDI which is great for capturing melodies or beats and reprogramming them.

• REX FILES
Combinations of MIDI data and sliced audio files that can be re-sequenced and generally manipulated. Some DAWs have dedicated REX player modules.

• OMF AND AAF FILES
Special files that contain some – but not all – content and info about a project. Useful for sending a remixer a project without having to export everything first.

• TIME STRETCHING
Altering the speed of an audio part without changing its pitch. Pitch stretching is also commonly available.

• MASHUP
Taking two or more tracks or parts of tracks and blending them together to make something new.

• THE CLOUD
Online, server-based methods for either swapping large amounts of raw project data or in some cases for collaborating on projects using web-based tools.

• MIDI SYNC
Synchronizing tracks or equipment – or both – so that the original material and the new stuff you add all stays in the correct time.

levels of quality options including lossless. Most of these sites have decent free plans that give most people what they want though there's also usually an option to upgrade for extra features like sales stats. Beatport now only deals with labels but has an associated site called Baseware that still allows independent artists to sell music through online stores. Services like iTunes, Amazon and Spotify can also be used though you will have to go through an intermediary service such as Mondotunes since they rarely deal with people on an individual basis.

Radio and blogs are still a great avenue for promotion and all the usual rules of tenacity and casting your net wide apply here just as with promoting any music.

Of course if you have remixed an established artist or even someone who is doing their own promotion it should be easier to get them to promote your remix under the banner of the work they are already doing. Ultimately, remixing can be a good way to promote both yourself and the artist whose material you have remixed, so it's in everyone's interests to see it succeed. **MT**

asp 800

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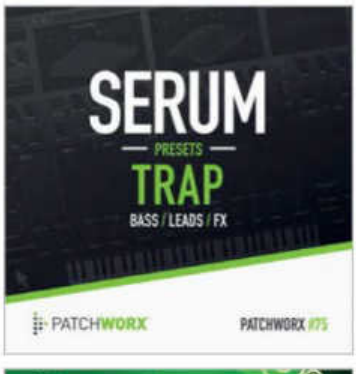


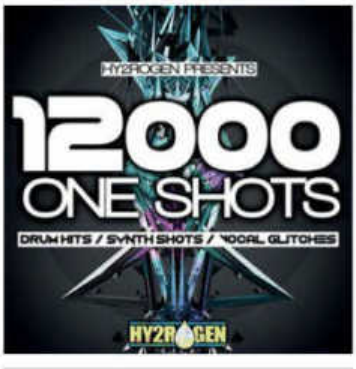


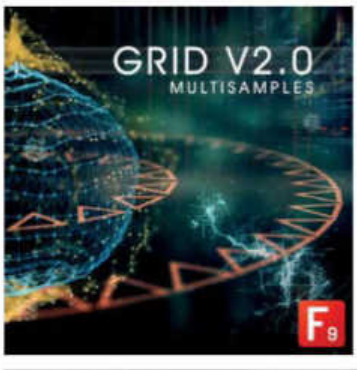












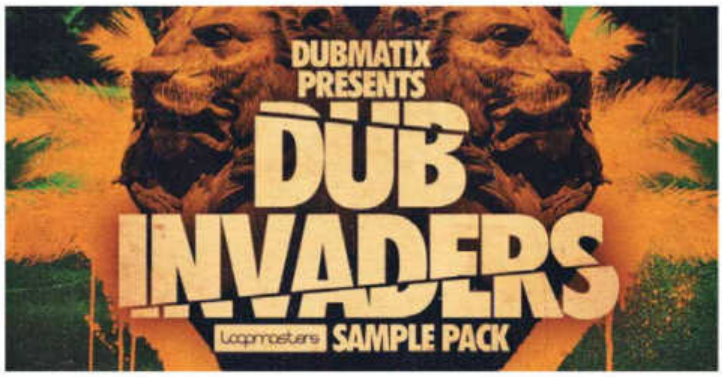












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MT Feature The Producers

SVEN LENS

Welcome to the latest in our series of producer interviews, where we put successful studio owners and engineers in the spotlight and ask them to pass on their knowledge and experience. This time, it's Sven Lens and As Loud As…

The Amsterdam-based studio As Loud As is run by Sven Lens, who has worked with some huge names in the recording world but is just as happy offering advice to new bands at his incredible facility. He has recorded with Lil' Wayne, Willie Nelson, Nelly Furtado and Snoop Dogg and worked at many festivals, including Rockin' Park, handling the live duties for Lenny Kravitz, Counting Crows and Ben Folds. We caught up with Sven to talk tips, sparse arrangements, DIY recording and six-foot speakers.

MusicTech: Tell us a little about yourself: why you got into music and the position you are in now, running your own studio…

Sven Lens: I'm a 40-year-old producer/engineer/musician, working from my studio in Amsterdam. I work as a freelance producer and engineer doing mostly music, but also quite a bit of sound for television, live sound and – just for the fun of it – some other stuff, together with fellow musician Gijs Pronk. Together, we run Audiomedia.tv where we make music for commercials, feature film, games and so on.

As to how I got into music… my parents played me Steely Dan, Zeppelin and Queen most every day when I was a kid. After playing guitar in my youth, I got better and better, but not good enough to start a career as a guitarist. As a teenager, I recorded a demo with my first band – all Metallica covers – and the engineer made us sound even worse than we were back then! I was sitting behind the console, tweaked a few knobs and it sounded better, and I just loved the technique, playing with EQ, axes and faders. From there on, I bought a small Tascam portastudio, a little desk and a few more bits and got myself into studios because I could do a bit of Pro Tools, which was up and coming back then. I was employed by a studio which did a lot of music sessions, and I worked there for two years before it went bankrupt. After that, I officially started for myself: www.asloudas.com was born.

> The engineer actually **made us sound worse** but I was sitting behind the console, tweaked a few knobs **and it sounded better**

MT: What is your overall philosophy or approach when it comes to music with playing, recording and production?





Top: a varied bunch of instruments in the live room and (bottom) mixing in the box and out

you… You have got to make sure you understand that and deal with it. And, of course, music has to be your passion if you want to be an engineer or producer. It's a tough question to answer though!

MT: Tell us a little about your studio: the main components behind it and a little about how it all came together…

SL: Right now, while my new studio is being built at our new house, I rent out a place in Amsterdam where I use my own portable Pro Tools HD set in a small flightcase, a super-fast Apple Mac Mini i7 connected to an RME MADIface USB, which is connected to an SSL interface. The MADI interface lets me hook up to most of the live consoles, which is good for concert work.

The main components would be that Pro Tools set, slaved to a Grimm CC1 master clock, connected to my Cranesong Avocet, which goes into Bryston amps, which feed PMC TB2 near fields and those big PMC MB2 speakers – with subwoofers. They are six feet tall and they are magnets for selfies – which I hate by the way. Everybody wants a picture next to one of those speakers! Other components in the chain are two original 1073 preamps, Manley ELOP, Millennia preamps, original Neumann U47 and U67 tube mics, and more.

SL: Music means so much more to humanity than we all think or know. In every phase of my life – and I'm sure in that of other people's – music played a big role, from Metallica, Sepultura and Therapy? as a frustrated teenager to Steely Dan or the jazz and classical music and everything in between I love nowadays. In the studio, my opinion is that 95% of the sound of a recording is in the hands of the artist and/or the musicians.

As a producer, depending on what you do, I just try to get the best out of everybody by making them feel comfortable, at ease and give them as much confidence as possible. A studio is not a natural environment for most musicians: headphones, different acoustics, a guy behind the glass watching

MT: What are your favourite sound-generating studio tools – synths, guitars, etc – and why?

SL: For me, that would be electric guitars, because I play them myself. I think I know what I like to hear from a guitar recording, and through the years I experimented a lot with guitar amps, mics and preamps…and learned a lot from my mistakes! Years ago, while reading *Mixing With Your Mind* [by Michael Stavrou], I was amazed by the trick Stavrou uses for finding the right phase and sound from an amp, so I use that one a lot, too. It's a great book by the way. Right now – together with a friend – we're developing a little stompbox to find the sweet spot for your mic in front of the guitar cabinet. It is really cool and simple because the only things you

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As Loud As Studios features the best of old and new gear with (anti-clockwise starting top left) live and listening areas plus the main area complete with jukebox and (top right) those selfie-inducing, six-foot PMC monitors. Yes please

more or less need are a mic preamp, a noise generator and a headphone output.

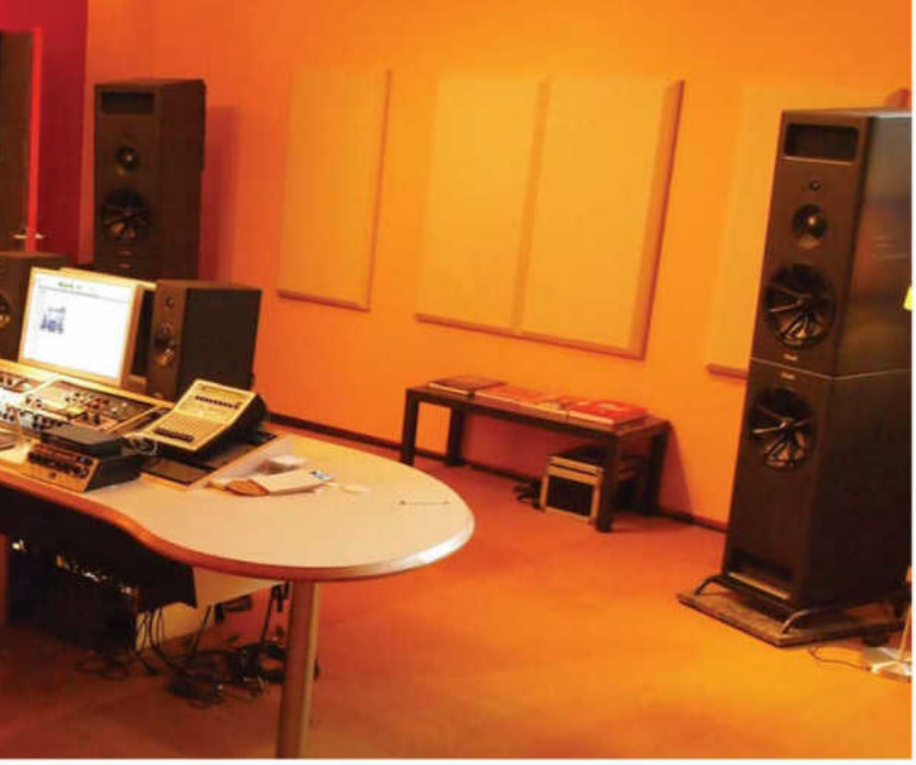
MT: And outboard – what plug-ins or outboard do you find most creative and most useful on a day-to-day basis, and why?
SL: I love the Manley ELOP compressor. It is so easy to set up, and besides its smooth, smooth compression I love the sounds it gives you. I would describe it as 'tubey', I guess. I use that unit every day. The harder you drive it, the more you hear it working, even when not compressing.

> People you work with **can be all over the place** and that used to **really get to me**. Now I just **accept it** and realise they **may have a good reason for it**...

MT: When you get asked about music production at the studio, what would you say is most common subject that people need to know about?
SL: The main question I hear is: 'Why does it sound so awesome?' I guess that it is me who is responsible for that one, right?! I think a lot of people think that it's the gear and technology that make the music sound good, and that it's so important, whereas I think the musicians/performers and how they play is the critical part to how things are going to sound.

Of course, mics, placement and all of that stuff is important, but once you have mastered that skill, you find out it is the band or the artist that really makes the difference. Although there is amazing gear which really does something nice to your sound, it will never be as important as a great musician laying just down his or her tracks in a great way.

MT: And when you listen to music recorded by other people, what is the biggest production mistake that you hear, and what is your cure-all advice for it?
SL: I have two, both from a studio perspective. In a lot of songs from up-and-coming bands, I hear this one before I record them: I want to do something about the arrangement of the song. Not in how the structure of a song is, but in how much it is played. A lot of newer bands tend to record as much as possible, layer after layer, simply because it is possible these days to do it and every member of the band wants to get heard.



When you write with your band, try to make one good part for your instrument, no dubs and no extra parts that just get in the way of the other parts. That sounds simple, but it is often the most difficult thing for a band to hear. As a real-world example, that is why I love Steely Dan: their arrangements leave space for every instrument, while each instrument plays a great part in the song. And on the other side of the spectrum, with something like Sepultura's *Chaos AD* (and more great 'loud' albums), although these are very intense and in your face, they also still manage to leave room and space.

The second one is that I get quite a lot of songs to mix which someone else has recorded, and I therefore know that this is the mistake that a lot of people make. It is that many people think that just sticking a mic in front an amp, instrument or singer makes a good recording that you can then make sound better in the mix, whereas what you should be doing is making a recording sound great in the first place!

Move your mics around, flip phase switches to see what sounds better, compare different microphones, try different drum kits, amps and instruments. This helps you more then anything to get a great-sounding song, so maybe my overall advice should be to call the person who will mix your song before you start recording to see if he has helpful tips, etc!

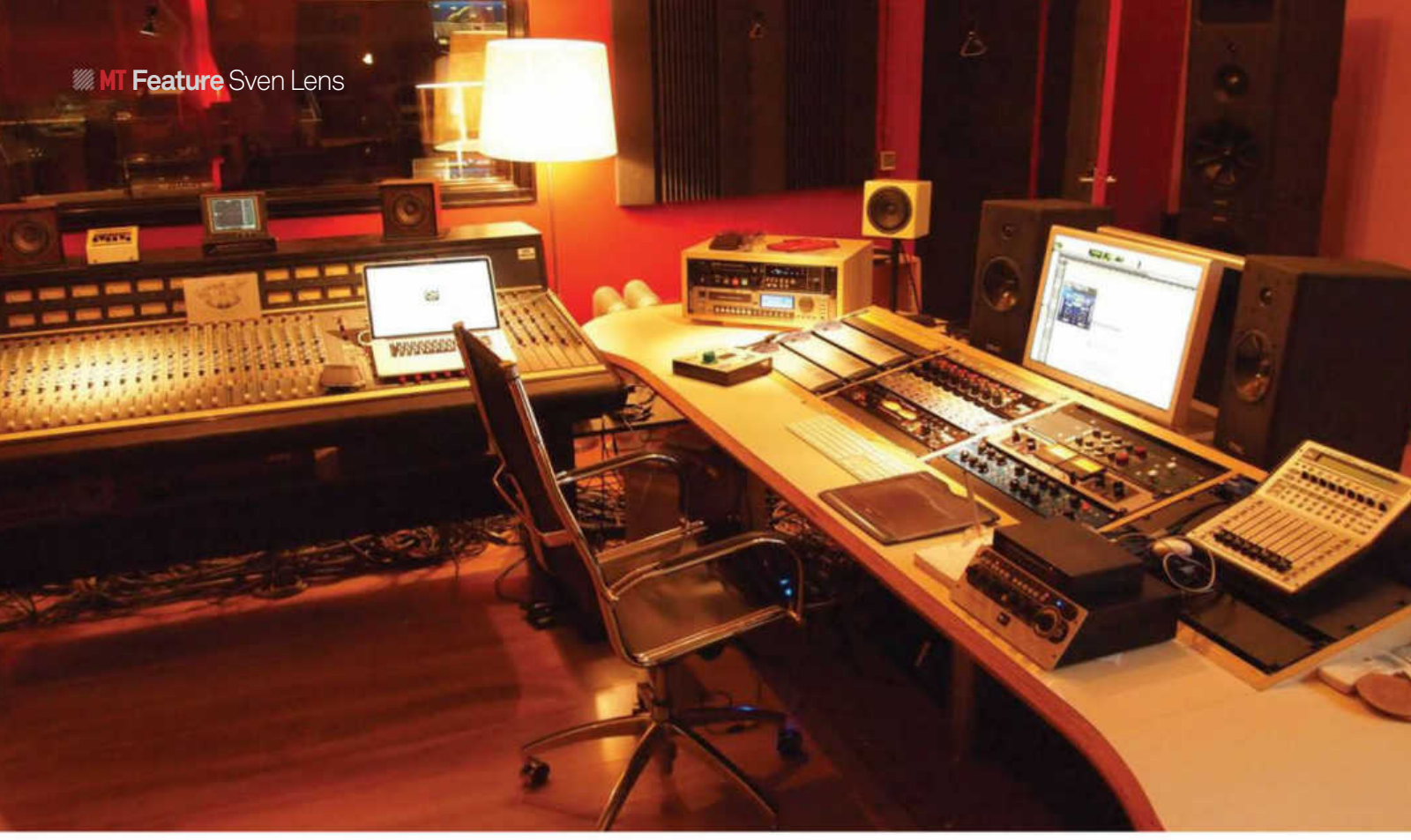
MT: What advice and experiences have you picked up from running a studio that you can pass on to our readers?
SL: You have to have a passion for music and working with people. I love music and I love the work I do. If I wanted to earn big, big money I should've worked at a bank I guess…

MT: And from working in the studio?
SL: I have learned to work with people. For all kinds of reasons, people are happy, stressed out, angry, silent, outgoing or something else. When I started out, that sometimes really got to me, nowadays I just accept people can be all over the place, and most of the time they have a good reason for it!

MT: And what about any advice from working within the music industry as a whole that you can pass on?
SL: Nowadays, the whole band/artist to record company relation is a lot different than, say, 20 years ago. With the internet, artists have a way better artist-to-fan relation now because of all kinds of social media and crowdfunding. They can organise gigs themselves, can put their songs on Soundcloud, Reverbnation, etc. And they can do all of this *before* they even hook up with a record label. I think that is a really positive thing. Bands work harder because they see that it pays off. Also, the industry has changed a lot without older people involved knowing it all, I guess!

MT: Talk us through at least one of your production tricks or processes that you tend to use most often and is something that perhaps defines your sound.
SL: I maybe tend to follow the original authentic sound of a band instead of trying to push it in some





direction. Also, maybe the way I record guitars using that phase trick I mentioned earlier. Also try not compressing so much and just riding faders a lot while mixing! Try using automation more, as it helps keep your mix dynamic.

MT: What is on your wish list, studio-gear wise?
SL: Actually, there is not that much. I love DW Fearn preamps, and I would like a couple of them.

MT: What would you like to see developed in terms of studio technology, and why?
SL: That is another difficult one again. I know this is never going to happen, but I always wondered why speakers were never standardised (if that's the word). In the dubbing stages, engineers decided they wanted to use U87s for all recordings of voice actors everywhere because they then would have some sort of consistent-sounding tracks. As I am in quite a lot of different studios, for me it would be nice to have some sort of reference speaker – which could be anything as far as I'm concerned – so I know how the control room sounds. You know, a speaker can sound way different in one studio compared to other studios. But I know this will never happen, so I bring my own speakers most of the time…

MT: Tell us about your latest project and some of the latest work done at the studio…
SL: I did quite a lot over the last few months and one of them is a band called Princeton – five young guys who can actually play! They are not like a boy band, but musicians who write their own pop songs, which were awesome to record and they were great to work with. Also, I have done some amazing work with some incredible engineers and producers, including Andy Bradfield, Chris Porter, Bob Clearmountain, Alan Branch and so on. Why do people come to me? Word of mouth, I guess. I make really strong White Russians, you know?

It's not all about the gear – having a great environment does help a lot…

MT: What have you got planned for the future?
SL: I'm busy with some album recordings, a little tour with a choir… which may sound odd, but they are an amazing choir of students that sing songs from Mahler to the Stones… they actually performed with the Stones on the big festivals here last year. Never thought I'd ever like a choir, but these guys are great. Besides that, I'm discussing doing some tips and tricks videos for Sonic Distribution over in the UK. I'm a big fan of their Munro Sonics Egg system, and they do Rupert Neve, Apogee, Waves, etc, as well.

MT: Lastly, what do you think is the future of music production?

> I know a lot of guys who do a **lot of great stuff on a laptop** but most miss **real musicians and acoustics** on their tracks

SL: There will always be great albums from new artists. I know a lot of guys who do a lot of great stuff at home on their laptop, but most of the good ones miss real musicians/acoustics on their tracks and are searching to collaborate with producers/musicians to create something different. At the moment, I'm working with this really young talented guy who makes awesome tracks at home, but we're introducing real drums, percussion and string ensembles into that. It's coming together really great, sounds rich, full and dynamic, almost dance 2.0 – maybe that's were it is going.
For more information on Sven Lens and As Loud As, go to www.asloudas.com. MT

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Logic Pro X | In depth

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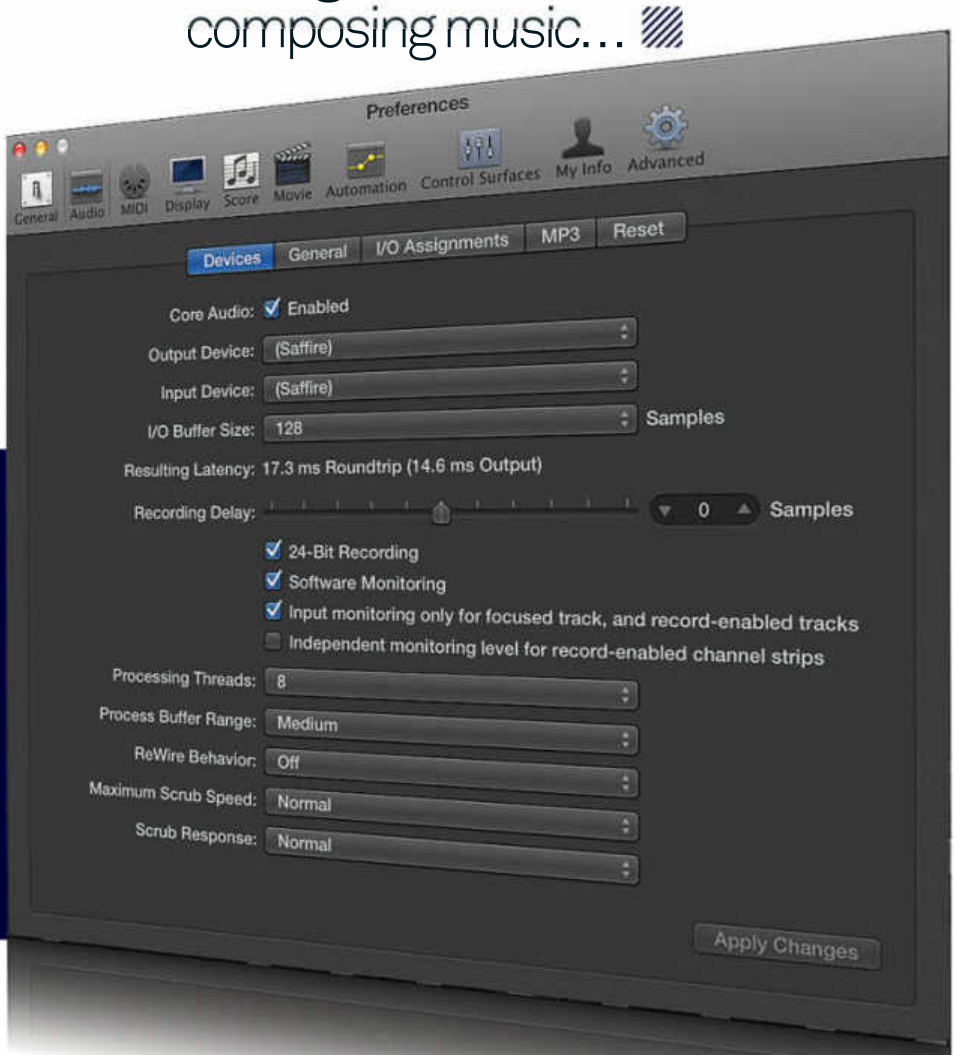
Setting up and saving time in Logic Pro X

Setting up a Template project with a few tweaks here and there could save you time in the future and increase your workflow. **Andy Jones** says 'pay attention, you will do this only once' and will hopefully help you take the steps to become a Logic power user...

Those readers of a certain age might remember a (terrible) sitcom where an actor with a (terrible) French accent would say 'pay attention because I will say this only once'. Well, that's me, but without the terrible accent. Because if you follow this tutorial, you should have to do everything just once and then hopefully your future production life will be easier. The idea is that it's for beginners to Logic but I'm willing to bet that even seasoned users from Logic and other DAWs might pick up a thing or two and think 'why didn't I do that years ago?', so I urge you to all give it a go. You only need read the following pages once (and they won't self destruct afterwards – sorry, mixing my metaphoric analogies there...).

So what we're going to do is simply set up a project in Logic Pro X. Now that's easy, you might think – simply select one of the default ones that Logic offers you when you choose to start a new project and you are away, right? You are correct, that is one way of doing it, but we're going beyond that. First up we'll show you how to tailor a project to your set-up. Then we'll move on to making a project work for you and your music and, along the way, we'll make sure you create it as a Template Project file for every time you use Logic. This is an ideal scenario for the majority of us who use Logic Pro X in the same way and

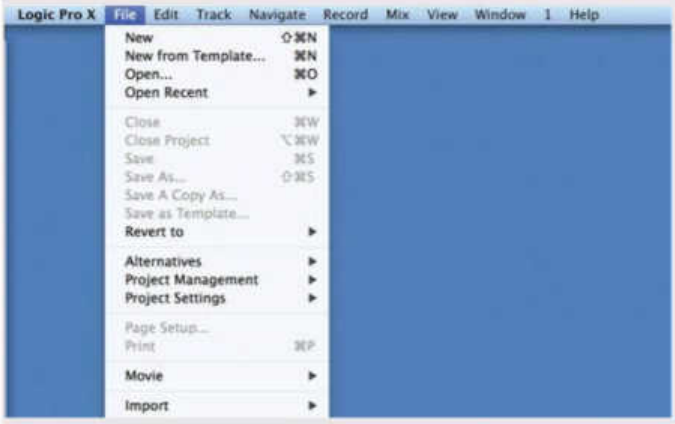
> Stick with us and **we'll tell you how** to set-up a project file that you can return to and **use again and again** to **save time** when composing music...



FOCUS ON YOUR AUDIO INTERFACE

You will need a decent audio interface when recording with Logic and our tutorial helps you assign and set up a Template project for use with one. We've used a Focusrite Saffire Pro in our example but there are many more available, spec'd to how you record and play back. You can get really simple ones that allow a couple of tracks to be recorded and played back, or complex multi input and output interfaces that allow entire band performances to be recorded into Logic for editing later. *MusicTech* has several recommendations which we round up in our regular 6 Of The Best features. You should also check out our tutorials at www.musictech.net that deal with how to set interfaces of different input and output combinations up within Logic for a variety of recording situations: from simple singer-songwriter set-ups to recording with a live band.

MT Step-by-Step 1. Starting out



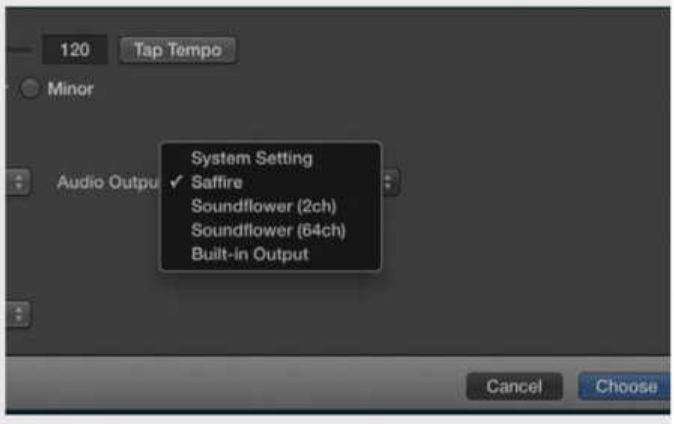
01 Open Logic Pro X and make sure you have no projects open. Select File > New to open a new project. Here we can choose New From Template or Empty Project. We will create a new Template file...



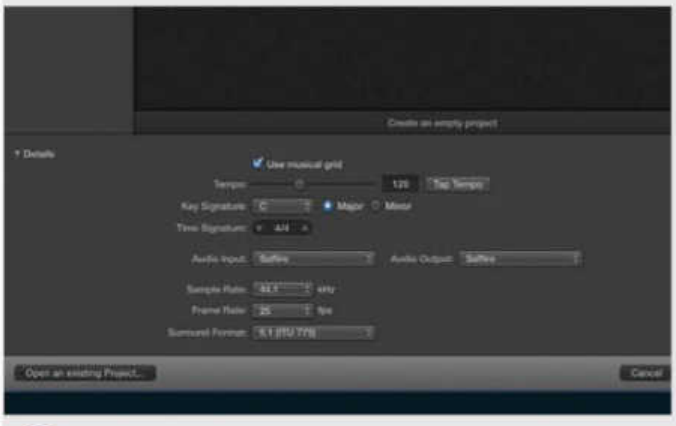
02 ... as the ones shown in Logic's standard list are not customised to our needs (yet!). That's what we're going to end up with but for now simply select Empty Project.



03 Before opening up our new, empty project we should set up our audio parameters in the check box below. Select your audio input device and sample rate from the drop down menus on the left.



04 And then our audio output device from the drop down menu on the right. This is obviously the same device and in our case we are using a Focusrite Saffire so we're selecting 'Saffire'.



05 We can also select the project's tempo and key in this main menu (beneath the Template types) but for now we'll leave the values as they are as we can change them later.



06 Now we choose the track types that our project is going to consist of. You get several choices including Drummer and External MIDI but our main ones will be Software Instrument and Audio, the latter as shown.

for the same kinds of music production, whenever we boot the software up to compose.

Beyond start-up

But we're also moving beyond this start-up phase and will investigate some of the time-saving aspects of Logic Pro – some of the shortcuts and the key commands that will save you time down the line. We'll also look at some of the other Logic features that could speed up your workflow by providing a more intuitive environment which will, we think, make your Logic experience much more fulfilling.

So stick with us while we guide you through the process of setting up a project, tailoring it to suit you and your music, creating templates and speeding up your workflow. You'll →

hopefully end up with a project file that you can return to again and again to save time when composing music. And if you are an experienced user, who knows, you might see Logic in a new light, and you might save time too.

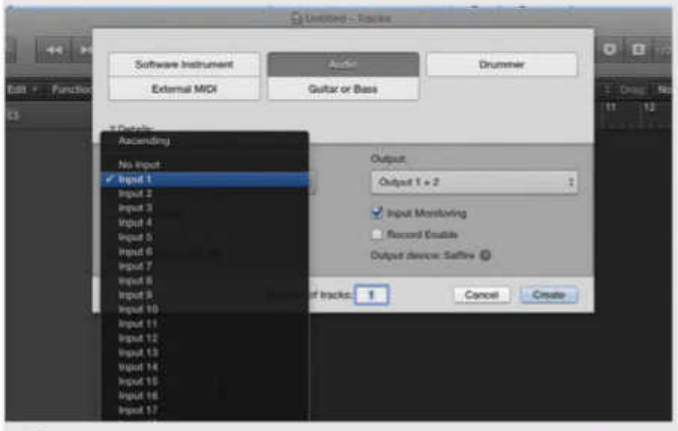
1. Starting out

We'll start our project in a normal manner but clear the decks to start an empty Template Project. You'll gradually build it up and add instruments, recording options, effects and the like, and eventually be in a position to call it your own and save it as your own Template file to load up later whenever you start a new project. For now, though, it's a case of opening a blank page ready to work on...

2. Linking an interface/soundcard

You can do this later (in Logic you can do pretty much everything later if you want) but it's just as easy to set this up now. You'll have to make sure that any audio tracks you create

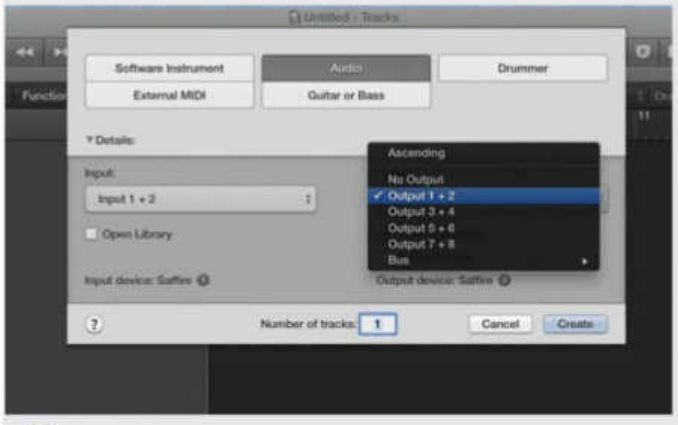
MT Step-by-Step 2. Linking an interface/soundcard



01 We need to check that the physical inputs of our soundcard are assigned to the right tracks we are creating. In this case we want this track to be our record input so have assigned it to 1 on the Saffire.



02 This is the input that we will be recording into Logic from i.e. whatever instrument we have plugged into channel 1 of our interface. In our case we simply have the mono input from a synth.



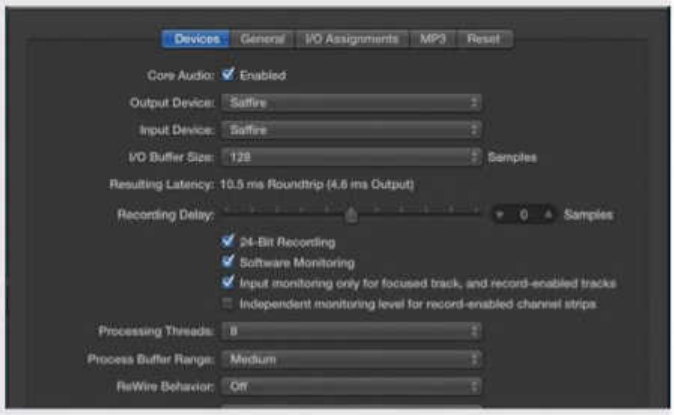
03 Similarly we may as well check our main outputs are assigned to our monitors via our soundcard. Here they are shown as channels 1 and 2 out.



04 On our soundcard, the monitor outputs 1 and 2 are assigned to the main monitors shown connected here. Our main inputs and outputs for our project are now set and our interface assigned.



05 Now press Create and you can see that our audio track is created in the main window. If we hit the mixer icon (top left) we can see our track and its Input is set to channel 1 on our interface.



06 Before we create multiple tracks in a Template check Preferences > Audio to make sure the interface is set as our audio in and out and our Buffer Size sits at 128.

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Plug any instrument, line or high impedance, into Babyface Pro's jack inputs 3 & 4. Record your guitar on the go to a laptop, iPad or iPhone, with no additional hardware required. MIDI I/O via an included breakout cable completes the package.

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- 12 Input / 12 Output channels
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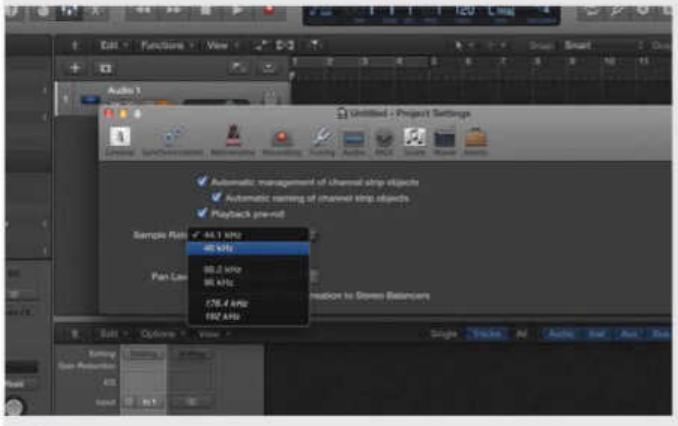
are 'talking' to the interface you have connected (see p38). That is, if you want to record audio from the outside world – like a guitar or keyboard – you'll need to make sure you plug your instrument in to the correct socket and link that to the audio track in Logic that you create.

Similarly you want the main outputs of Logic linked to the speakers that you have connected to the outputs of your interface. All of this is included and you should only have to do this here (very often it will already be set up for you).

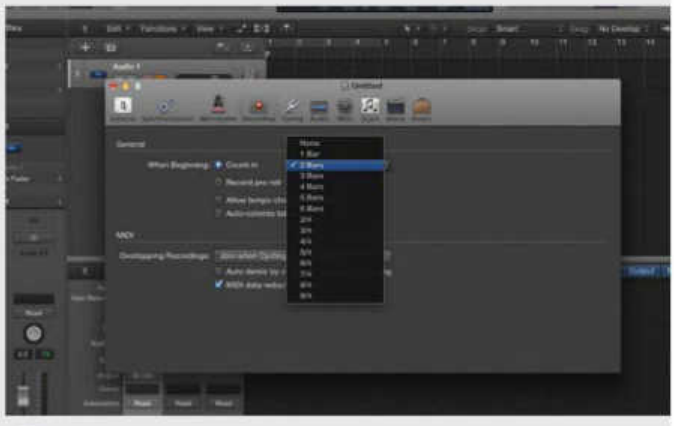
3. Project settings

At this stage it's worth looking at some of the global parameters for your new Logic Template project. As well as setting options like the Global Sample Rate, here you can also configure things like your metronome, your tempo, project key and other aspects of Logic production that you might want to set up as standards in whatever projects you use in the future. Set it up once, right here and right now, and you'll never have to bother with it again.

MT Step-by-Step 3. Project settings



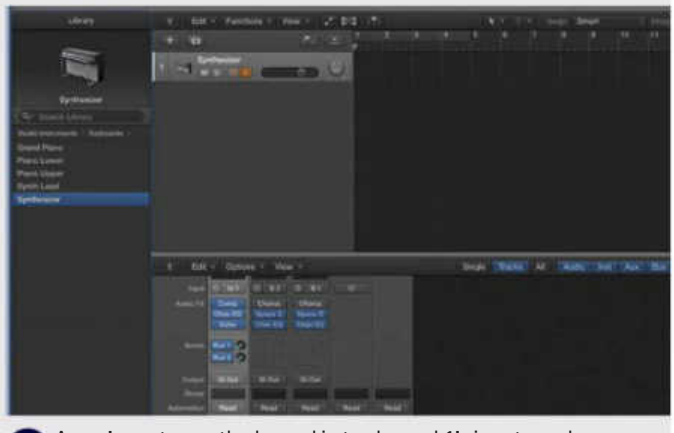
01 For the start of our project we should check Global Project Settings by opening up the File > Project Settings menu. We'll go to the Audio option and select 48kHz as our Project Sample Rate.



02 There are several other options you can edit in Project Settings including Metronome clicks and the Count-in For Recording. We like 2 bars so have set it accordingly.



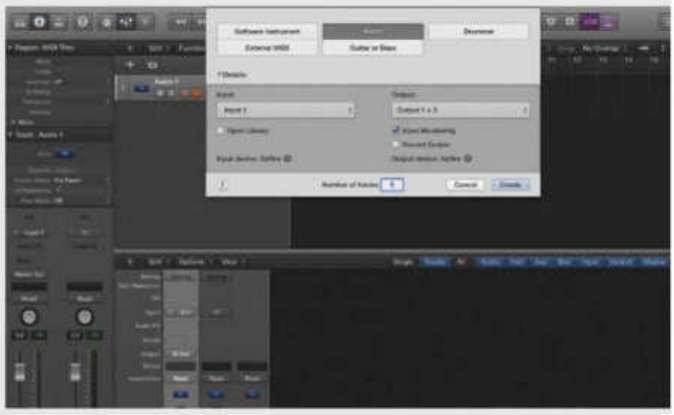
03 As we are recording audio on this track we can now set it up with effects from a standard list of supplied presets in Logic. Hit the library icon to show a list of instruments and channels strip settings.



04 As we've got a synth plugged in to channel 1's input we choose synthesizer from the library presets which then adds a selection of commonly used effects to that input channel.



05 Choose Stereo Acoustic Guitar, for example, and Logic adds some delays and a gentle EQ. It's a fast way of setting a Project up and you can easily come back and edit the effects later as shown.



06 Now we're going to add more tracks. You can simply add with the + icon as shown which will take you back to Step 6 and allow you to choose track type.

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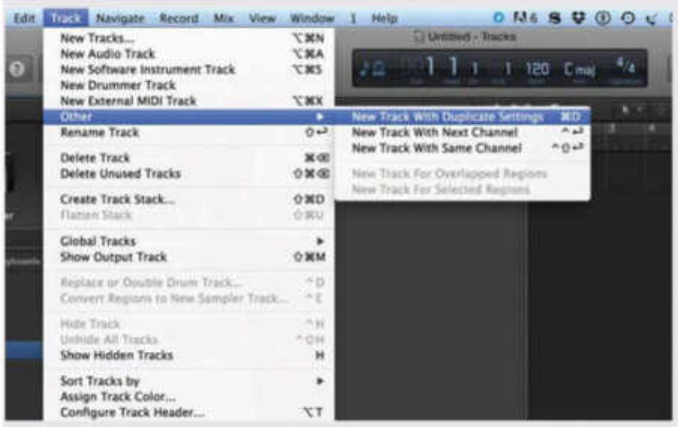
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MT Step-by-Step 4. Adding tracks



01 When adding tracks repeat Step 6 on p42. Better still, if you are adding similar audio tracks then select Other > New Track With Duplicate Settings (Cmnd>D) to add a track with the same properties.



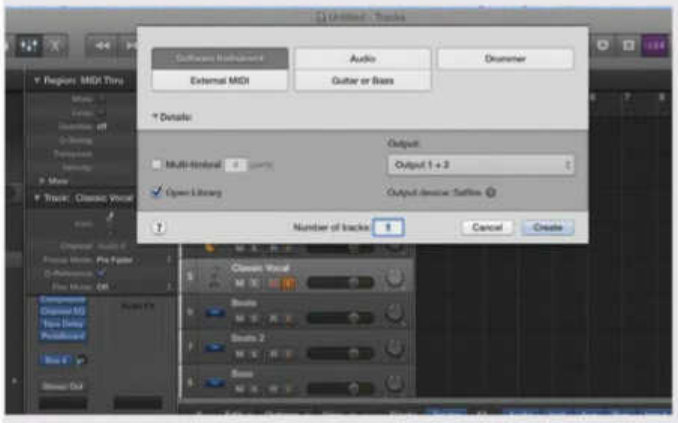
02 You can quickly create a project of tracks with similar properties. We've set three synth audio inputs up for a multi-instrument session. The only thing we've had to change is the i/p channels: 1 to 3.



03 We can now quickly add tracks that can carry audio for all of the band either as standalone audio tracks or as recording tracks. Here we've added vocals and guitar. Make sure you rename each track.



04 Once you are happy with all of your recording tracks add some standard audio tracks to load samples or other audio you might have on your hard drive like beats or basslines.



05 That's the audio side of the project sorted with both audio recording, audio playing and the interface set up. Now time to add software instruments. Press + and select the Software Instrument tab.



06 An electric piano will load as a typical software instrument. To change it you can simply select the instrument in the mixer and select an instrument from your collection. Here we have ES2.

→ One very neat option next is to set the track up you've created as a specific instrument type. In Logic you can add preset effects and other parameters onto tracks so if, for example, you want to record an external guitar onto the audio track we've created, select it from the library and the preset will add typical effects that acoustic guitar recordists might use when recording that instrument. It's very useful and we've chosen the synthesiser option for ours.

4. Adding tracks

Now we get to the final stage of the main Template Project build where we add tracks and flesh it out so it becomes a song framework that you can load every time and one that will be ready for those inspirational moments when you just want to make music quickly.

First up you can add other audio tracks either to record external instruments on or to load other audio in (samples

MT Step-by-Step 4. Adding tracks and finishing the Template



07 In a similar way to the audio tracks you can simply copy an existing instrument track with exactly the same parameters (Cmnd>D) or create them from scratch with new instruments.



08 To save time again you can copy track settings rather than everything, so if you like those guitar effects we had earlier when we created a guitar audio input track for recording you can copy them.



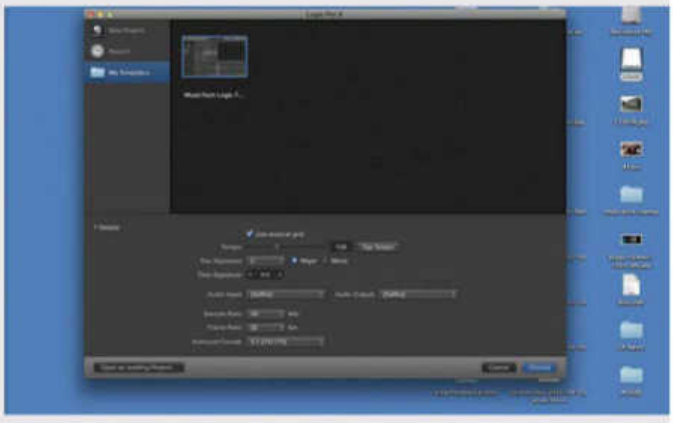
09 Simply go to the track you like the settings of and hit the Setting tab. A drop down menu appears, select Copy Channel Settings (Shift>Cmnd>C). All of the effects will be copied.



10 Now go to another channel, in this case the synth track we created earlier. Hit the Setting tab in this channel and paste the settings, copying effects from an audio to an instrument track fast!



11 Once you are happy with the numbers of audio (record and play) tracks you have and the selection of software instruments within your Template, save it in Save As Template.



12 Now every time you start a new project in Logic you can return to this Template, an empty piece of paper on a sketchpad ready to fill with your music.

and so on) from your hard drive. These can be created from scratch or you can copy existing tracks (but make sure to adjust the input channel if you are recording instruments into different inputs on your interface).

Then it's time to add software instrument tracks which enable you to load in your virtual instruments and sound libraries. Again the beauty of setting these up now is to save time later and to make sure all of your favourites are on hand when you load in your Project Template file.

We've also listed another speedy method of quickly copying those favourite effects configurations. So if you like Logic's presets for the audio track set-up, as explained earlier, you can quickly copy these effects settings to any tracks you set up, audio or otherwise.

Once you are done creating your standardised Template project, save it ready to load up every time you start a new song in Logic. Now all of your favourite instruments are ready and external instrument tracks set up to record.

5. Screensets

Another feature that really helps workflow is the Logic Screenset and you should set some of these up within your Template Project to save time later. Basically what these allow you to do is set up your favourite Logic window combinations and save them to be recalled simply by hitting the number keys 1 through 9. So you might have your main Project overview on Screenset 1, instantly recalled by pressing key 1, then you might have your audio editing windows set up on Screenset 2, instantly recalled by hitting key 2 and so on. The options are unlimited but we'd recommend using Logic for a while before you decide which sets are your ultimate favourites – but certainly try the

MT Step-by-Step 5. Using screensets



01 Screensets are a great way to save time and customise your project. Here is our Template Project as we created it. We'll use this as our base screenset so Lock it in as Screenset number 1.



02 With it now saved we can go off and set up other Screensets for commonly used parts of our production process. We can set anything up but first press 2 to start a new one and get this screen.



03 You might want your first Screensets to be for selecting instruments so simply open the main Library folder and select Lock. Now it's ready for recall when you load Screenset 2 by hitting 2.



04 Or you might want to have one Screenset dedicated to audio file management. Here we have the Browser open so you can load, save and get an overview of your audio by loading Screenset 3 (hit 3).



05 Many people use the Screensets in Logic to make track editing easier so have ones with the MIDI data of a track open and ready to tweak or dedicated to audio editing (shown).



06 There are infinite possibilities – simply open whatever windows, instruments or tabs you want. Here our Screenset is set up simply to deal with bass, both audio and MIDI, and with effects too!

tutorial below left just to get a feel of what you can do as these are great time savers.

6. Using key commands

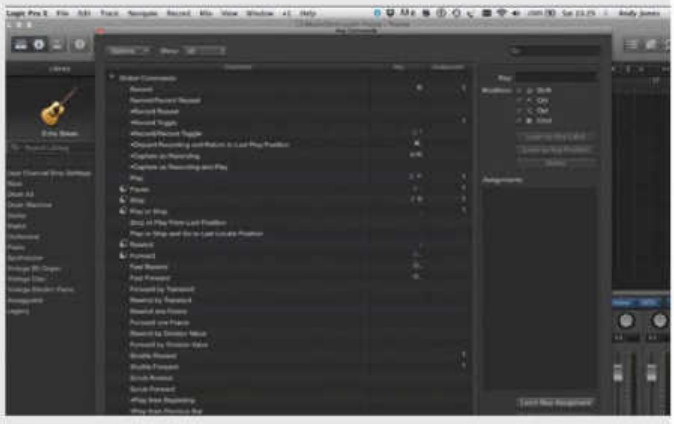
Finally we move on to the most common way of saving time when using DAWs and a function that has been around since the very earliest sequencer: the key command. Put simply, these let you carry out important (and no so important) functions at the press of a button, or a combination of modifier (shift, alt etc.) and button. At a simple stroke or combination of strokes, you can perform virtually anything without needing to resort to a mouse click, thus saving time. In Logic, these are all listed, easily editable and you can import your favourites from other software too.

We hope that these simple set-up and workflow tutorials will help you work more efficiently within Logic and allow you to get straight down to the art of music production with minimum fuss (and that you only need read this once). MT

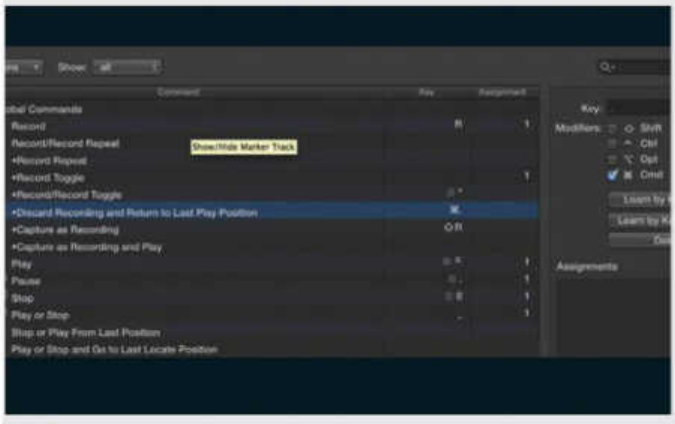
MT Step-by-Step 6. Using key commands



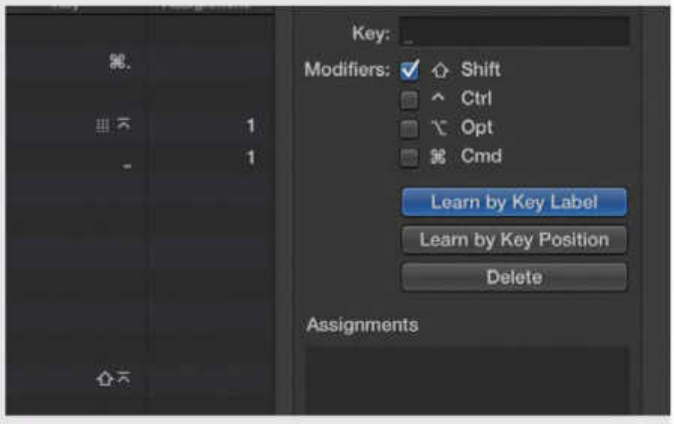
01 Key commands speed up your workflow by taking many common functions away from your mouse, so a quick press will do things like record (button R). Open them from the Logic > KC > Edit menu.



02 Here you get all of the Key Commands listed by category. We've opened the most common Key Commands from the Global tab which shows, among others, what keys control the transport functions.



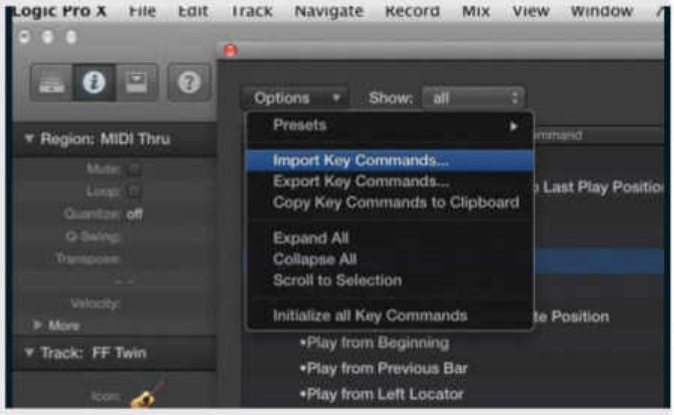
03 As well as showing the key you need to hit to perform the command you get the Modifier (Shift or other key combo) and what value is needed to assign this to an optional MIDI controller.



04 As we are in Edit Mode, if you are unhappy with any of the current commands, simply highlight the command you want (or search for it using the tool, top right) and press Learn By Key Label.



05 Now the combination of key and modifier that you press will be assigned to that function. It may be taken by another key command in which case the above will appear which you can overrule.



06 It's also very easy to import key commands from other software so if you are used to Logic 9's key commands, load them in via the Options menu within Key Commands.

Ableton Live The Ultimate Guide to Ableton Live Part 12

On the disc
DVD ROM
Accompanying project file included on the DVD

We're done! How to finish off your Live project...

You've reached the final part of our massive Live guide, and it's your last chance to tweak before sharing your song with the world! **Martin Delaney** is your master...

Welcome to the last stage in this long-running Live project. We're finishing with some extra master-track processing, then exporting and taking care of some file management. Optimising our master track isn't the same as mastering, which is the preparation of a final stereo mix or group of them, for distribution. That's an involved process requiring good ears, objectivity, and specialised gear, which unfortunately we don't have room for today – we'll talk about that another time.

In the walkthrough we use the Multiband Dynamics effect to modify the mids and lows in our track, but we also use EQ Eight for further adjustment of frequencies. EQ Eight has a useful real-time frequency display, or you could add the Spectrum device for a more detailed view. The other issue we address is master volume; you don't need to thrash your mix volume throughout the production process, you can boost it here. We use the Limiter, inserted after the Multiband Dynamics device, to increase our master volume while preventing any distortion of the final output. You can enjoy watching the Limiter's orange gain reduction meter react as you adjust the gain level! This is an important stage for changing the sound of the final mix; the more the compressor is working, and the more limiting is going on, the more heavily compressed your track will sound. If you're attracted to the character of extreme compression, you could also use dry/wet controls – set up a really extreme compression chain, then dial it back until it sounds more normal! If you're working with similar styles consistently, and you get a set of favourite devices, save them as an audio effect rack, and set up macros for your most-used controls.

When it's time to export, use Cmd>A to select the entire project. This step isn't crucial, but it's a useful visual reference. Everything highlighted will be included in the export – you'll see if you've left any stray elements beyond the supposed end of the song. You can also click and drag to highlight a section if you only need that part, or type bar numbers in the Render Start and Render Length boxes which appear when you type Shift>Cmd>R to open the Export Audio/Video window. Live's audio export options are mostly self-explanatory... except for dither, which can be a head-scratcher! This is useful when you're rendering to a lower sample rate than that of the original



WHY DON'T MY MIXES SOUND 'PROFESSIONAL'?

If you want more serious master track/mastering-type tools, sooner or later you'll use third party solutions alongside Live's devices. Probably the classic examples of these are Waves' L2 Ultramaximiser and iZotope's Ozone. The L2 is fantastic for quick fixes – when all you care about is making your song louder, it has a very straightforward set of controls. Ozone, though, is much deeper and customisable, being more oriented for mastering than mixing. Conveniently, it also runs as a standalone application which is great if you're mastering a batch of several tracks that belong together on an album.

MT Step-by-Step Finishing off



01 Time to finish! As usual, see the updated example set on the disc (TUGTAL12). Having refined your mix last time, let's tweak the master track, mix down our final files, and back up our content.



02 Totally uncompressed music sounds weirdly quiet; we want to optimise volume, without smashing the **** out of it! We need to retain dynamics but give it weight to play alongside other music.



03 Live has the tools for this in devices such as Compressor, EQ Eight, Glue, Limiter, Multiband Dynamics and Utility. The Audio Effect Rack/Mixing & Mastering section includes relevant presets too.



04 None of those presets are ready to use 'out of the box' – they all need work to suit your material. Make sure you use those pre-assigned macro controls at the front of the racks.



05 The Multiband Dynamics/Multiband Compression preset is loaded on our master track. Reduce the mid output gain to -3.60dB, and Low to -2dB; sounds better to me.



06 Load the EQ Eight before that. Apply a low cut at 40Hz, a cut of -2dB at 220Hz and a boost of 2dB, at 8.86kHz. These are quite typical EQ settings for a stereo mix.

project; because Live works at 32-bit internally, lower bit rates, like 16, require conversion downwards. This process can create audible distortion, caused by the 'blocky' character of digital audio waveforms as opposed to the smooth contours of analogue, but dithering adds a tiny bit of digital noise to the signal, effectively smoothing over the effect of the distortion. In most situations, this added noise should be unnoticeable. Dithering works differently with different material – conduct some tests of your own and see if you can spot the difference. Ableton states that the Triangular mode is the 'safest' for general use, while pointing out that dithering shouldn't be used if you're sending your mix onwards for more processing – mix to 32-bit without dithering if you're doing that. Video export settings are dependent on your hardware and the destination of your finished movie. For a quick fix I'll use an Apple device preset like iPhone or Apple TV – they provide reasonable quality without being too big.

When everything is done, the last thing you want to deal with is file management, but be patient and take action to protect your work so it'll still be there when you revisit it for a live show or an alternative mix in six months. The first thing to do is use Live's Collect All and Save command in the File menu. You'll see a pop-up pane with options

MT Step-by-Step Finishing off (cont'd)



07 Add Limiter/Upper Ceiling after the Multiband, set the ceiling to -1dB. Set the gain to 4dB, to push the limiter. Raise the master track volume to 0dB; nothing will exceed -1dB.



08 You now have something that's louder and little more controlled frequency-wise, but not pumping too much. Just for fun, briefly move that gain up to +12dB, and hear it overcooking the limiter.



09 Use Shift>Cmd>R to open the Export Audio/Video window. The short version is to say 'use the default settings until you have a good reason not to'! CD quality is usually good enough.



10 Let's review a few items in that list, though. At the top, choose Master. We want a final stereo mix, no need for separate tracks. Make sure you're rendering the entire length of the song.



11 Read our main text to learn more about those confusing dither options. Leave Create Analysis File, Normalize (read about that in the main text as well), and Convert to Mono all set to Off.

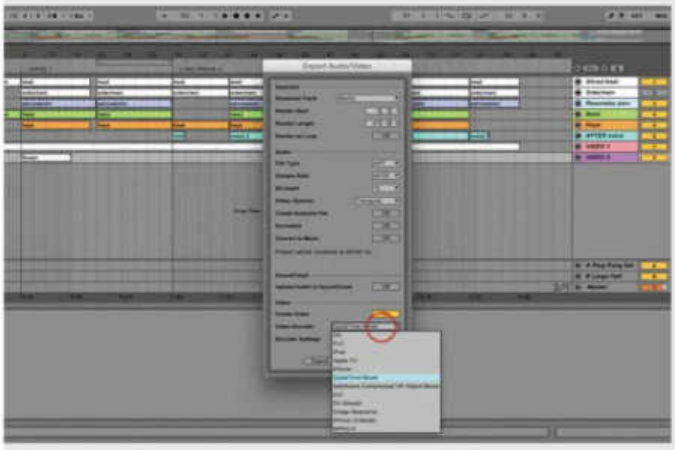


12 You can't export to formats such as mp3 or AAC directly from Live – you'll have to use iTunes or another application for that. But you can go to directly to your Soundcloud account.

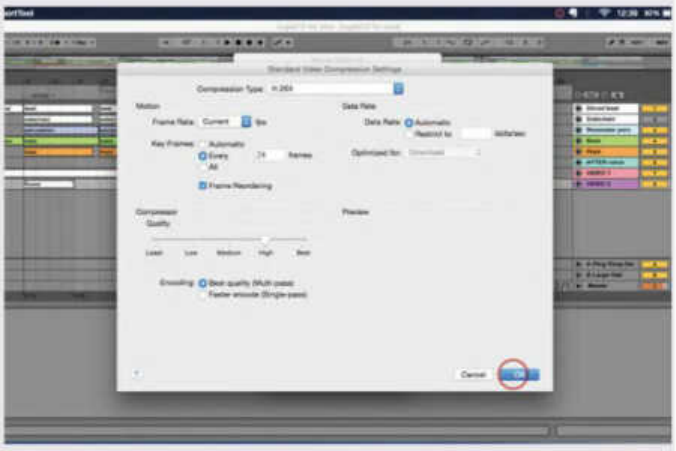
relating to which project elements you can copy into the Project folder. I always leave all of these turned on, so everything I've used in the project – samples, presets, movie clips – is copied. Sure, this takes up more disk space, but it's worth it for the security. The next stage after that is to create a Live Pack – a 50%-sized archive of your Live project, that will take up less space when you email it, or Dropbox it, or move it to another drive. To make a Live Pack follow this path: File/Manage Files/Manage Project/Create Pack. Get that project tucked away safely. Move it to an external hard drive, and ideally clone that as well. If you're really nervous, keep the clone at another location, in


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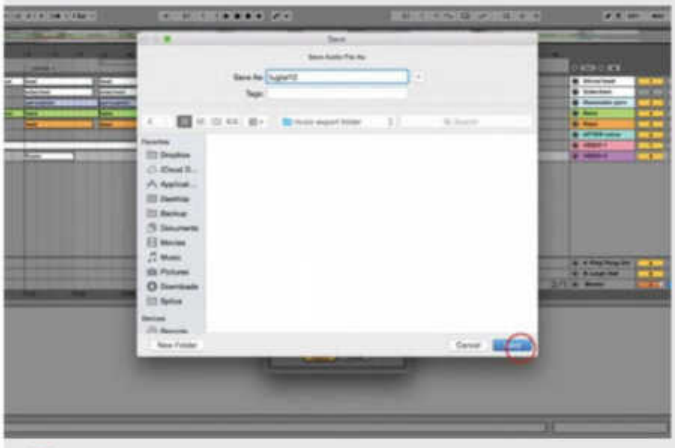
MT Step-by-Step Finishing off (cont'd)



13 With movie clips in the set, there are some extra settings to look at. Turn Create Video on. The video encoder list might vary depending on your hardware, extra video cards, and so on.



14 If I'm rendering for my own purposes I use one of the Apple Device presets, but if the situation demands it I'll select QuickTime Movie and edit the many available settings as necessary.



15 Click Export, and choose your rendering destination. When export is complete you'll have a stereo audio file, and a QuickTime movie, which contains both the video and audio from your project.



16 If you wanted to do real mastering or to get it done for you, you'd depart from this walkthrough a little. You might render the song without the multiband dynamics processing, to have options later.



17 If you're curious about visualising compression, a good exercise is to render with and without the master track compression and then import those into a new live set to compare the waveforms.



18 You can master inside Live, or with a dedicated application like Ozone. Usually it's not done inside the original song project as you might want to handle a number of stereo mixes as a batch.

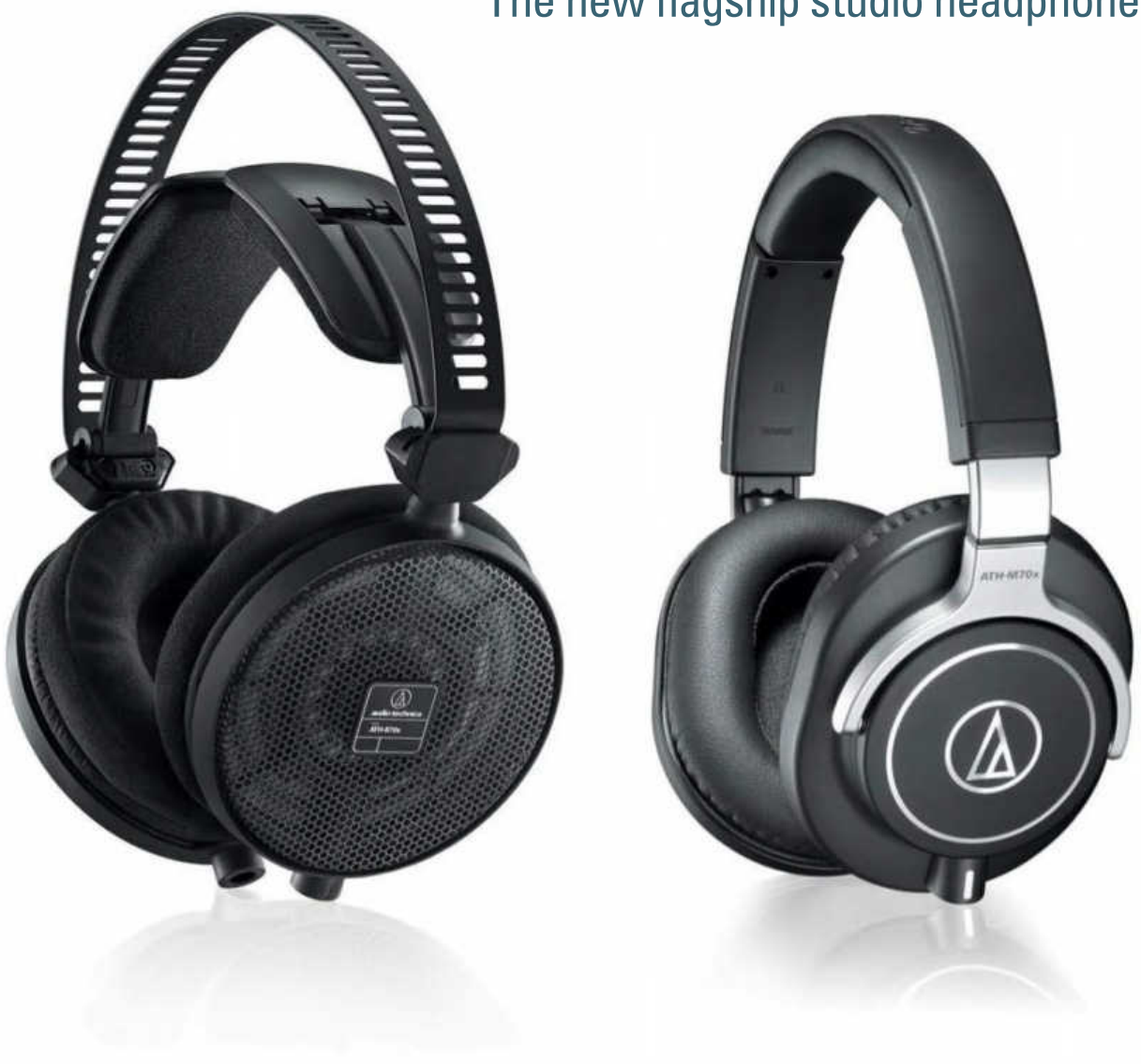
case your house is hit by a tornado or whatever.

This project's been about techniques, rather than creativity. In the real world, how do you know when your tune's finished? When do you cut if off? The problem is, there's no 'right' answer, you can't just buy a plug-in or take a pill. It does helps to have a deadline. If you were paying for studio time in the old days, that was a huge motivation right there. Now most of us work at home, we don't have that pressure, so announce a date for a release or live show – anything that forces you to finish!

That concludes this project for now. Thanks for playing! We'll be moving on to something new next time... MT

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Technique Mastering Part 4

Separating the frequencies

Like mid-side, multi-band processing is one of the tools that gives mastering its mystique. **Mike Hillier** delves into the this often misunderstood world…

One of the most misunderstood and misused techniques in the world of mastering, more-so even than mid-side, is multi-band processing. Far from being a staple of the mastering chain, multi-band processing is usually thought of as a problem-solving tool, something to reach for only when the mix needs work that can't be fixed with simple EQ and compression.

Multi-band dynamics processors split the signal into multiple frequency bands, enabling you to apply different dynamics settings to each band, often even going so far as to use expansion on some bands and compression on others. Most multi-band compressors use linear-phase crossovers to split the signal bands, which is important to ensure the phase relationship between the bands remains constant, so that when the bands are summed at the output of the processor, no phasing occurs at the crossover points; although this can have the disadvantage of introducing pre-ringing in some cases. The exact number of bands available to you will depend on the processor you are using, with most processors providing three or four bands, but some such as Waves C6 or FabFilter Pro-MB provide as many as six bands.

On the disc

DVD ROM

Accompanying project file included on the DVD

> Multi-band dynamics **lets you focus** your dynamics processing on a **specific frequency range**

This month, we're using the track *Breaking Point* from the *Borderline* EP by Art Block, mixed by Ben Walker. Find out more about Art Block at soundcloud.com/artblock. The EP will be available in March from artblock.bandcamp.com.

One at a time

One of the most common mistakes made by engineers new to working with multi-band compression is the use of all the available bands at once. This mistake is further supported by presets which almost always make use of all the available bands. However, it is very rare that you will need as many frequency bands as this, and in fact we rarely use more than one or two bands at a time. Multi-band dynamics lets you focus your dynamics processing on a specific frequency range, so narrow the crossover filters of your processor to cover just the problem frequencies and deal with those. For example, if one note of the bass guitar pops out of the mix every time, and this problem wasn't fixed in the mix, you may be able to isolate the frequencies that are popping out and apply compression just to this region. A fast attack, fast release and low ratio will help control the frequency without too many audible compression artefacts.

De-essing is another use of multi-band compression, focusing the compression on the sibilant region of the vocal. This is more effective than simple EQ, as the mix will remain unprocessed when no sibilance is present.

One trick we like to use to try to get a nice glossy high-end, especially on dance tracks, is to compress only the high-end of the mix, then boost the same region with an EQ. This produces a more constant energy in the top-end.

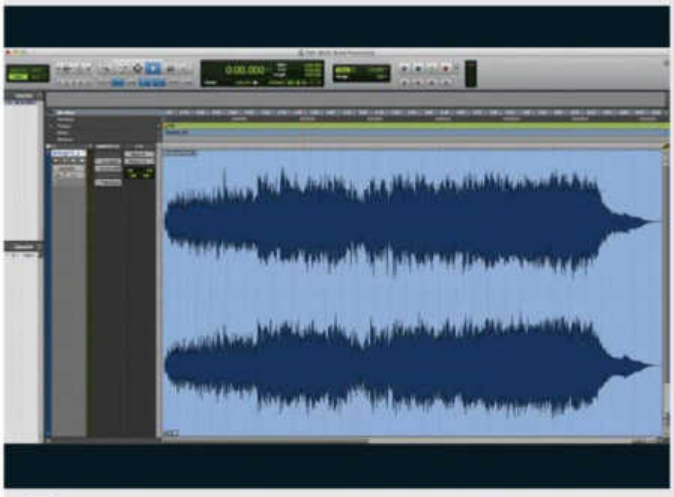
At the other end of your mix, if your kick isn't providing enough weight, rather than applying a low-end EQ boost, which can bring up a lot of energy in the mix, eating up your headroom, try using a multi-band expander at the bottom end, bringing the kick up a dB or so each time it hits. This way, you should still have plenty of headroom to get a really big, loud-sounding mix without squashing the life out of it. MT



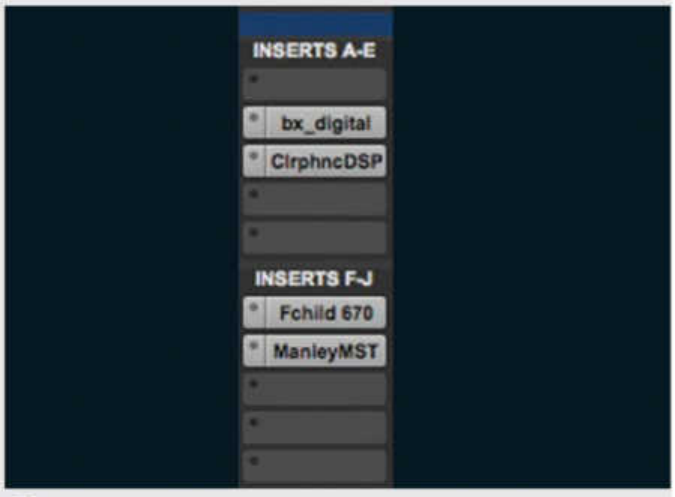
HIGHLIGHT

Most modern de-essers are actually multi-band processors, offering only a single band to work with. They can, however, be used quite successfully to deal with all manner of problems, from de-essing to problem guitars, overly present cymbals and even bass.

MT Step-by-Step Multi-band processing



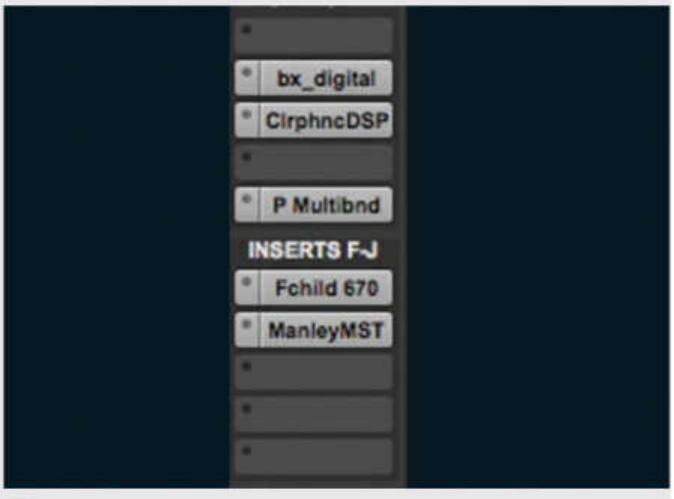
01 *Borderline* is built around a fairly standard modern rock/pop arrangement. The mix has a pulsating guitar pattern panned wide, with the bass, drums and vocal needing to occupy the centre and push the track forwards.



02 We've already done a little processing in this mix, using techniques discussed in previous workshops, using the Brainworx bx_digital V2 for mid-side processing, the Clariphonic and UAD Manley Massive Passive MST for EQ and the UAD Fairchild 670 for compression.



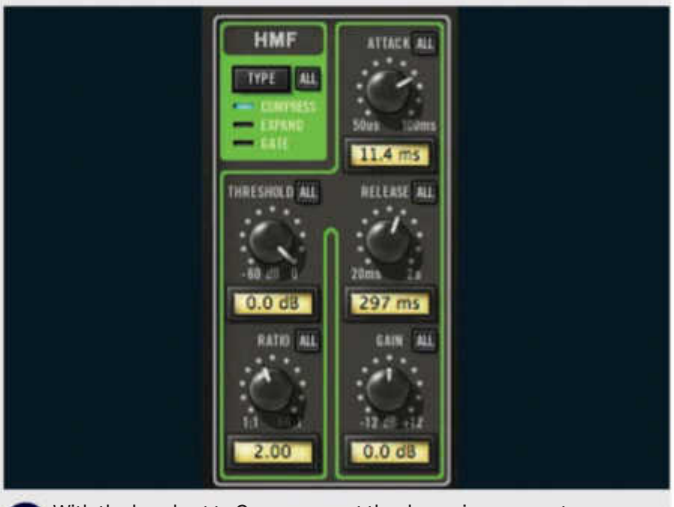
03 We're going to use a multi-band dynamics processor to try to bring the wide guitars under control, and to control the weight in the bottom end of the mix. The UAD Precision Multiband is one such tool, with several very useful features, but there are many alternatives.



04 The placement of the multi-band processor in the signal chain is very important. We've opted to use it before the stereo compressor in our signal chain, in order that the Fairchild 670 won't have to respond to any specific frequency that overpowers the mix.



05 Solo the band you want to process and drag the crossover frequencies in to isolate the area of the spectrum you want to focus on. Here, we've used the HMF band between 1.39kHz and 3.03kHz.



06 With the band set to Compress, set the dynamics parameters as you would using a standard compressor. A low ratio, fast attack and slow release is going to give us the most natural sound on these guitars, but may also affect the vocal.

MT Step-by-Step Multi-band processing… cont'd



07 Now bring the threshold down to achieve the amount of compression you want. We're aiming for no more than 2-3dB here.



08 To deal with the bottom end, we again want to solo the frequency band in the processor and tune the crossover frequency to isolate only the fundamental of the kick, without processing the bottom of the bass guitar.



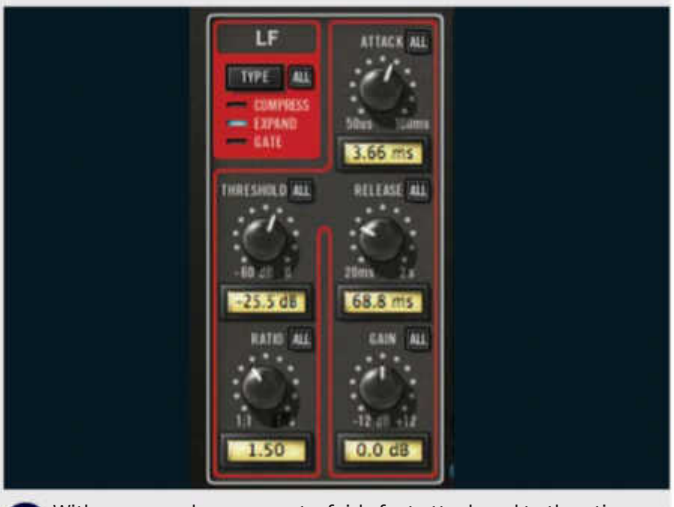
09 Here, we're going to use a slow attack and slow release to try to control the bottom end, while still allowing most of the kick attack through.



10 If you want to control a region, such as the bottom end, and then bring it up to add more weight, you can do so with EQ after the multi-band processor, or by using the make-up gain for each band within the multi-band processor.



11 An alternative means of adding weight to the bottom end, rather than controlling it by bringing it down as we have here, would be to switch the bottom band from a compress mode to expand.



12 With an expander, you want a fairly fast attack and to then time the release to add to either the attack portion of the kick, or the whole body of the kick. Very low ratios go a long way, so don't go overboard. We often stay below 1:1.5.



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MT Lead Review

Hardware ▪ Software ▪ Mobile tech ▪ Accessories



AKAI
MPC Touch

The MPC name is indelibly associated with pads and hip hop, not so much touchscreens and techno. **Martin Delaney** isn't feeling nostalgic though – he wants to touch the future. Will the MPC Touch play along?

Details

Price **£499**
Contact **via website**
web
www.akaipro.com
System requirements:
Mac OS X 10.9, 10.10, 10.11
Windows 8, Windows 10
2GB disk space for basic installation, 20GB for full content installation
4GB RAM (8GB recommended)
Dual-Core processor, 2.5GHz or better
Weight: 2.1kg
Dimensions: wxhxd 411x218x48mm

Key Features

- **7" colour multi-touch display, 1280x800 resolution**
- **16 velocity-sensitive MPC pads with RGB backlighting**
- **4 touch-sensitive control knobs**
- **Large data encoder knob**
- **2-in/2-out audio interface**

I bet for many, the Akai MPC name conjures up hip hop with classic gear like the MPC2000 or, more recently, the Ableton connection via the APC40 and the original Push.

The hip hop association isn't always helpful –not everyone shopping for gear is a hip hop producer; combine that with a need to show technological parity, and maybe we have the forces that motivated Akai to produce the MPC Touch, a control surface for MPC software with 16 pads, an audio interface and a 7-inch diagonal, full colour multi-touch display.

I've used Live and Logic for some time to make electronic and guitar music but no hip hop, so I don't have any sentimental attachments to MPCs. It's 2016, so what can this MPC do for me?

New forms

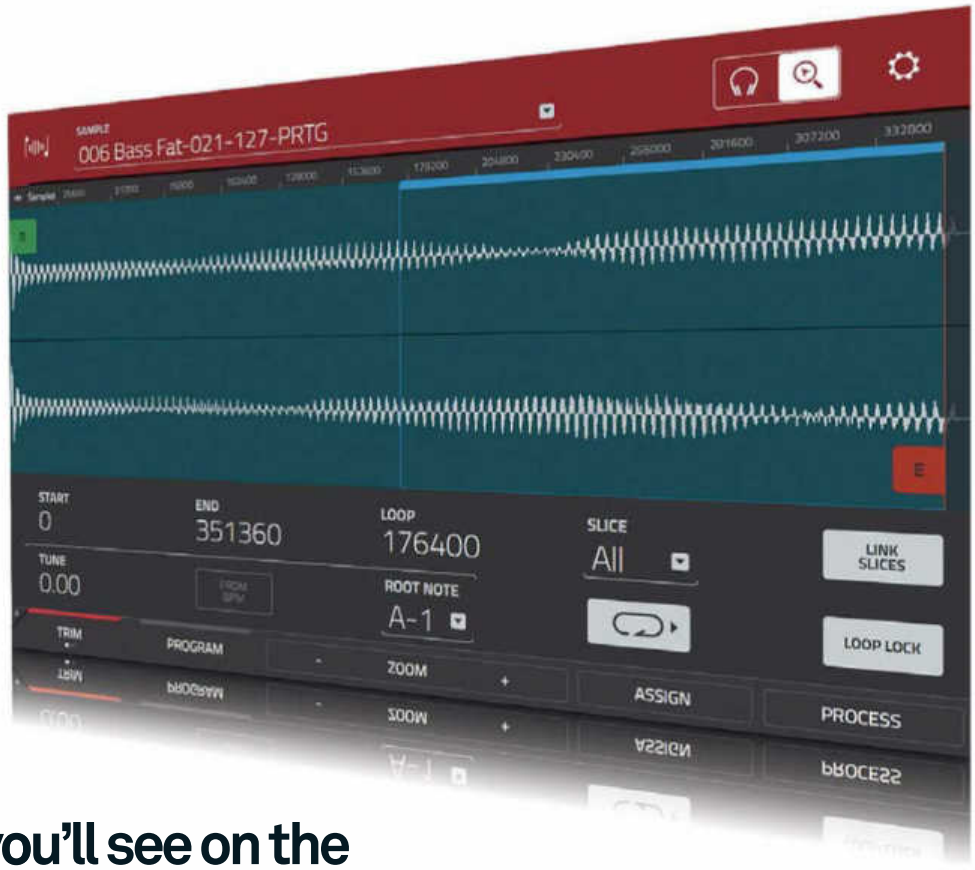
Physically, the Touch doesn't represent how I think of Akai controllers; it's sleek, matt black and businesslike, and there's no grey plastic. – an influence from the Push days, maybe. Its display is surprisingly large and illuminating.

The box includes a mains power supply, USB cable, brief printed documentation and registration info for the free software content, a cloth to keep the screen shiny, a multi-angle riser which slots in to prop up the back end and two MIDI DIN-minijack adaptors. Yes, you can use this in a rig with hardware, but you'll still need that computer running – it's not a standalone device.

Last time I unpacked an Akai product, there were several DVDs inside the box, but now we can enjoy the luxury of downloading many GB of content, including the MPC application, AIR Instruments for MPC, example projects, and thousands of samples, including loops and instrumental phrases, as well as the expected drum hits. You won't keep it all on your computer, but the stuff you keep, you'll use, if you see what I mean.

Round the back are connections for power, USB, those MIDI minijacks, headphones, left and right audio in on 1/4" jacks, and left and right out on the same; there are also tiny knobs for record volume and master volume, and a Kensington lock slot. Two little buttons on the right-hand side serve to adjust display brightness.

Install the MPC software on your computer, power up the Touch and – ooh boy! It acts as an extended computer display, so the first thing you'll see is your computer's desktop image. Once the MPC software is launched it takes over the display, but you can switch views at any time by pressing the Shift/Erase buttons on the Touch. Naturally, I immediately opened Ableton Live and dragged the Session View window to the Touch's display – a massive unashamed Live geek moment and I loved every moment of it



The first thing **you'll see on the Touch display** is **your own computer's desktop image**

Above: The MPC Touch's sample editor

Below: The possibilities offered by the MPC Touch are near-endless

(before you ask, no, you can't apply touch control to the computer through this window). The display is clear and bright and, even with my lousy eyesight, detailed enough to launch clips and scenes in Live from it. This'll be a great source of visual feedback in the studio and on stage, and I expect there'll be some interesting hacks along the way. If, for some reason, you have an urgent need to run the Touch and use the audio interface and hardware controls without mains power, you can do it, but the display is disabled.

The Touch aims to supply pretty much the complete MPC experience without having to leave the hardware and go to the computer screen, and it definitely pays to stick to that, especially initially, as it can be confusing to switch between the Touch and computer versions of the same features; the MPC software itself is not particularly elegant, while the Touch version provides a more modern workflow, combining with the hardware pads, buttons and knobs to cover all the input bases in one convenient footprint. All you need to add is a computer (yup) and headphones and you're good to go, especially with all that free content; there's enough raw material to keep you out of trouble for some time. Once that starts to wear thin, you can import your own content and record directly via the audio inputs.

The audio interface section is pretty basic, but it's still welcome – one less box, one less USB cable, one less power supply to deal with. I plugged an SM58 (no 48v power is available) into the left input channel, and had no problems getting enough level to capture a speech sample. Very straightforward →



Other methods of touch

There are other ways to touch your music software. At the more basic end, you have iOS devices, the iPod Touch, iPhone, and iPad – with one of these you can run controller apps, such as Lemur, TouchAble and TouchOSC, or one of the many synth and mini-DAW type apps, including Akai's own iMPC. For a more deskbound solution, try the Slate Raven, a 27-inch touch surface dedicated to controlling all of the major DAWs on the market, including Pro Tools and Ableton Live. Stepping away from the computer, you'll find touchscreens on some synths as well, including Roland's Jupiter-80.

– the path between connecting an input source and recording a sample is about as short and direct as it could be, and it's just as simple to crop, normalise and process whatever you've recorded.

Furthering the Touch's standing as a do-it-all device is the ability to browse and load AU and VST instruments from the display, and then use the pads or the step sequencer to create patterns using those sounds. The Touch pads, by the way, are seriously effective examples of the form, some of the best I've used for a while, and are of course velocity- and pressure-sensitive, with their backlit colours changing according to velocity, which could be handy if you're using velocity to trigger different layers. Ableton went more soft and squishy with the Push 2 pads, but these ones are still defiantly firm and percussive, which is fine because I don't think anybody will be looking at this as their primary keyboard instrument.



Above: The MPC Touch has a slick, matt black appearance and bags of functionality

> You can go through **almost the entire creative process** without touching the **computer**

Smooth operator

The immediate user experience is impressively smooth thanks to the hardware interface, but if you're not familiar with MPC software, you might be surprised at how much it can do, with sampling and editing (including threshold-based recording, cropping and fades), looping, audio effects

Getting to grips with the MPC Touch

1 SCREEN
The 7" diagonal full-colour screen has become the hub for this new MPC, and it's the reason why you'll spend less time staring at your computer and holding a mouse.

2 PADS
It's an MPC product, so of course pads are going to be the way you'll play. Organised in banks and groups, use them to launch loops or as a 'keyboard' to trigger instruments.

3 BUTTONS
Clearly labelled buttons combine with the screen to make it amazingly fast to get around the Touch and to figure out where everything is. You don't need to be coming from old Akai gear to understand this.

4 ENCODERS
Again, like the buttons, easy. Overall, the Touch layout is impressively uncluttered – that screen pays off.



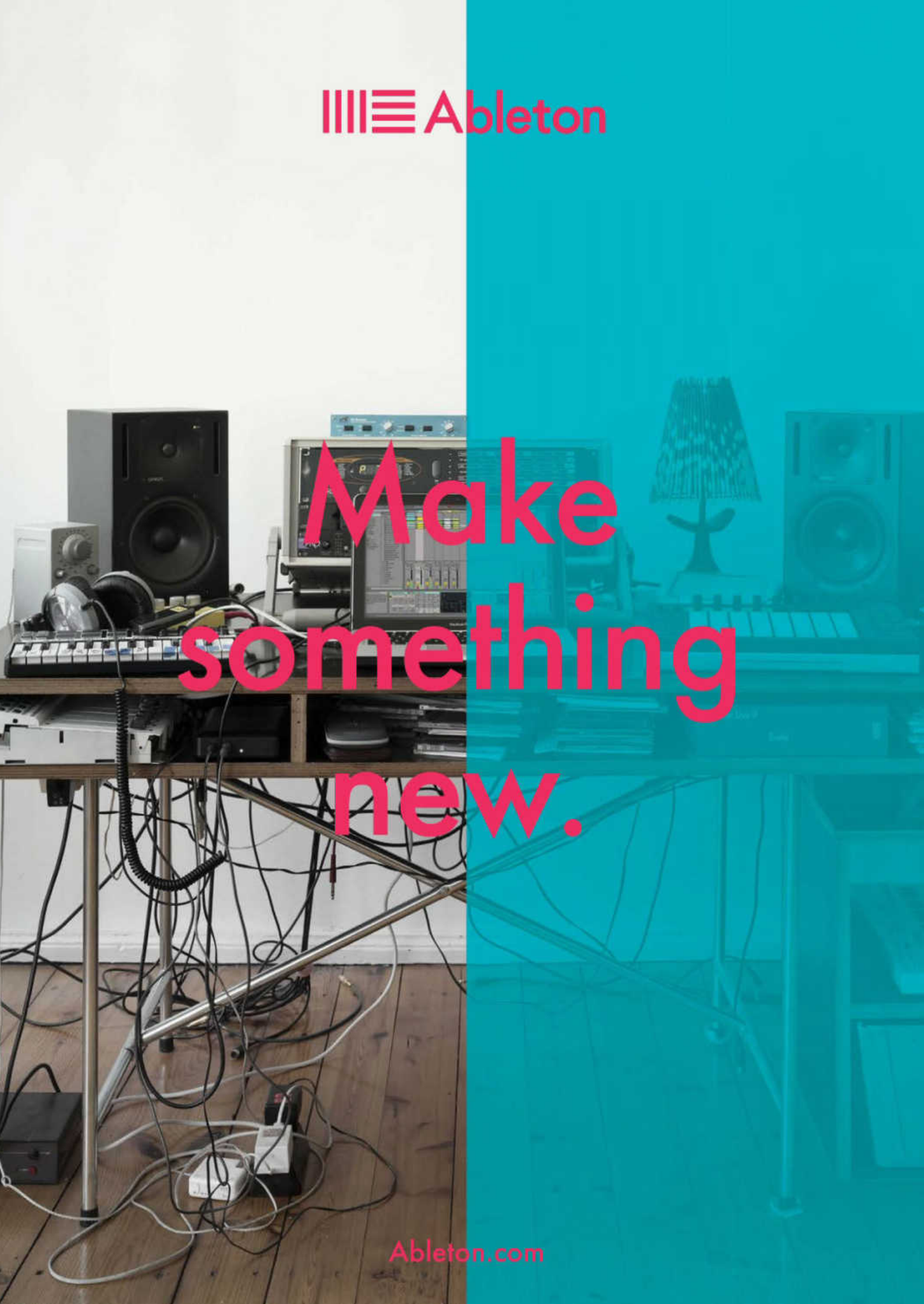
5 AUDIO CONNECTIONS IN
Left and right stereo in on 1/4" jacks. These can be used for regular soundcard-style inputs to your computer and DAW, or more specifically brought to bear for sampling purposes!

6 AUDIO CONNECTIONS OUT
Likewise, proper outputs. You might have a favourite 'posh' interface you prefer at home, but this is a great asset for travel and gigs.

7 MIDI CONNECTIONS
We're surprised Akai isn't making more of this but the Touch is a MIDI interface as well; connect your favourite controllers or instruments to your computer.

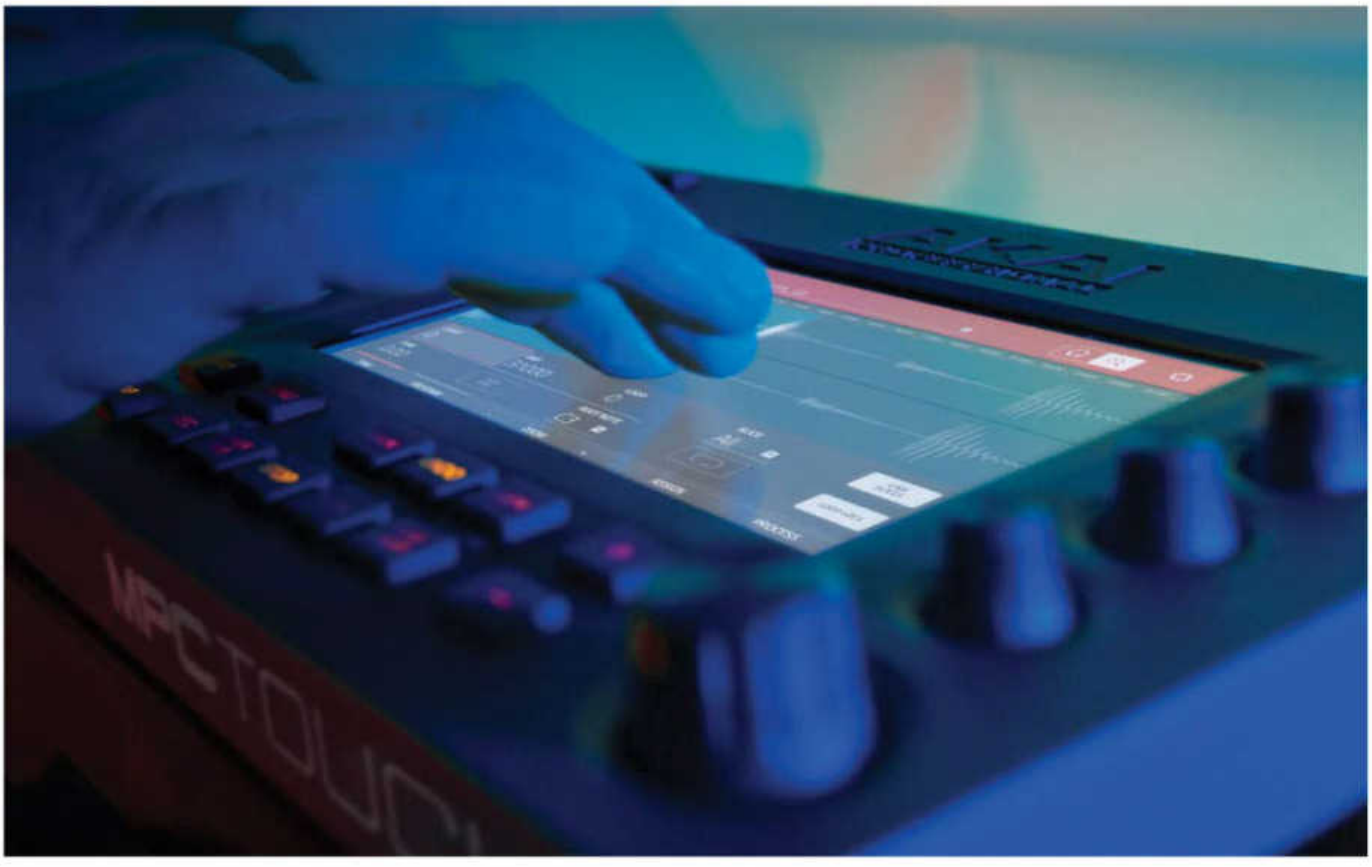
8 CASE AND DESIGN
Low-profile black box. It's a hybrid design of a traditional MPC, always found on an Akai with pads, and also similar to the more recent Akai sampling products.

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Anything you can get on your computer, you can see on the Touch – **the potential is huge**

(assignable to XY controls on the display) and sequencing of patterns and tracks – it's a fully functional 'mini' DAW. The pads can be loaded and controlled from the Touch directly, triggering single hits, loops, or entire sequences, quantised for Live-like rearrangement of song structures.

The depth of control available through the Touch is such that you can go through almost the entire creative process without touching or even looking at the computer. This independence also allows you to be more creative with your physical setup and position the Touch as almost a remote control – you can be working some distance from the computer, and running everything from the Touch. This is something I've used an iPad for, especially during live shows where you don't want your expensive MacBook sitting in a vulnerable location. Don't forget, anything you can get on your computer screen, you can see on the Touch – the potential is huge!

We've established that the MPC software is capable enough, and there's no reason why you couldn't use it to create complete tunes. However, in the real world it's all about integration; most of us will want to use the Touch alongside another DAW, and the MPC software can run as an Audio Unit or

Above: The MPC Touch's user experience is excellent

Below: The back of the MPC Touch houses a USB connection, MIDI minijacks, headphones output, left and right audio inputs and outputs and several other ins and outs

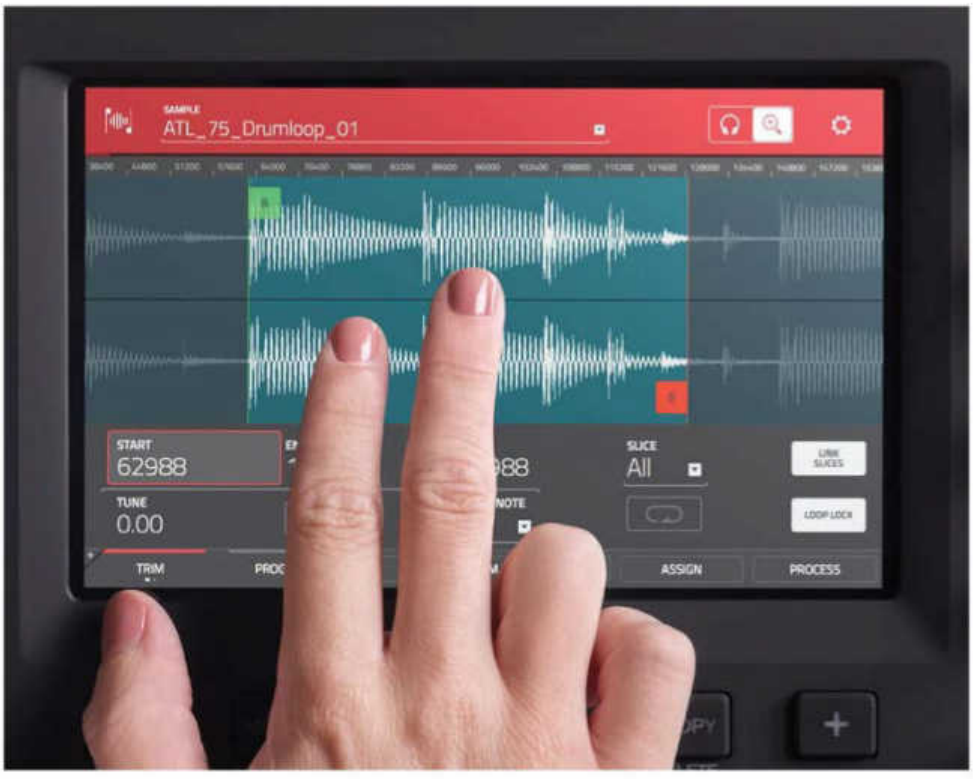


coming soon

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SAMPLE LIBRARY





Above: The Touch brings a suite of sampling, performance and production software to the table

→ VST plug-in. This feels much like running one DAW within another, and for a lot of us it could obviate the need for a ReWire setup. Visually and functionally, there's little difference between the standalone and plugin versions, the main one being that audio and MIDI inputs are handled by the host software. You can still load AU and VST instruments and effects into the MPC software when it's running as a plug-in, which adds to the DAW-in-a-DAW vibe, and could lead to some monster setups.

Both Live and Logic Pro X are drum-rich environments, but adding the Touch felt like adding a hardware drum machine – you can effectively think of it as a piece of hardware for 99% of the time. If the MPC software isn't running, the Touch will send MIDI from the physical controls, but that's all, although a 'coming soon' message indicates that full MIDI controller functionality is imminent, including hopefully the ability to send MIDI CCs from the XY pad. I tested the MIDI hardware output with a Novation Bass Station 2 synthesiser, sending notes from the pads and from MIDI tracks from where, of course, you can send a full range of MIDI messages.

Minor concerns

My only serious criticism is the disparity between the cleanliness of the Touch interface and the clunky look of the MPC software, although Akai is on a roll with this thing and you never know what might be lurking just down the pipeline. This isn't helped by the manual, which is thorough but a little lacking in helpful quick-start content. This is where it really pays off to concentrate on the touch display and follow your nose.

And that display – I'm always sceptical of the 'you don't have to look at the computer' schtick, but this time it's true, or as true as it's likely to get. Does this screen make your life easier? Yes. Does this screen earn its place on an MPC? Absolutely. If you're new to music production, the MPC Touch gets you a full suite of sampling, production, and performance software, as well as a control surface, a touchscreen, tactile knobs and pads, tons of content and an audio and MIDI interface as well; given all that, the price is very reasonable.

I know there are Akai fans pining for a self-contained hardware solution, but look at modern hardware samplers; they're either toy-like gadgets, or like Elektron's Octatrack, a complex, expensive machine that seems designed to sow confusion among the populace. Bundle the Touch with a MacBook Air running Live and you get a mobile rig with all the potential of two screens, many GB of storage and a full DAW running alongside the MPC. Seems like a good trade-off. And no, there's nothing about this machine that forces you to go hip hop it'll work for anything, even bro-country! MT

Alternatives

ABLETON PUSH 2
www.ableton.com
If you have the desk space and you absolutely must have 64 pads laid out before you at the same time, and you're an Ableton Live user, Push is a serious option. Downsides? There are a few – big footprint, Live-only, no direct hardware or audio connections, no touchscreen.

NI MASCHINE 2
www.nativeinstruments.com
Maschine kind of grew up to take the MPC crown, integrating software and hardware in a way that nothing else did – with very desirable hardware, too. Like the MPC software, Maschine is a standalone DAW in its own right, but also quite happy working as a plug-in inside another DAW.

IPAD PRO
www.apple.com
If you're talking touchscreens and controllers, the new big iPad Pro has to go on the list. It's not just a bigger iPad – that expansive surface is killer for touch control.



MT Verdict

+ Akai has raised its game with this one, retaining the classic features functions and sounds, while reaching beyond the usual hip hop imagery
+ Lovely 7-inch touchscreen, big enough for editing and sequencing
+ Great workflow and software integration. No other software is required to use the MPC Touch, but you can also run it as a plug-in inside your favourite DAW to complete your productions
+ Tons of free content
+ MIDI in and out for hardware connections
+ Built-in audio interface

- Mains power required for full functionality. As we get more sophisticated hardware controllers, this is inevitable, but it's still annoying for the mobile music diehards
- No matter what, there are Akai fans who'll beef about this not being a standalone box

Forget history, these are the glory days – this is a great machine for any music producer. Fix the software GUI and this would be a 10/10 product.

9/10

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NATIVE INSTRUMENTS

Komplete Kontrol S88 & v1.5 software

Choice 9/10 MusicTech

Komplete Kontrol, the software, has been updated and the hardware gets an addition, too, in the form of a brand new 88-note keyboard. The ultimate integration? **Andy Jones** finds out…

Details

Kit **Komplete Kontrol S88 keyboard and v1.5 software**
Manufacturer **Native Instruments**
Price **£729 (S88). Other keyboards in the range are now at a lower price: S25 is £299; S49 £369; S61 £429**
Contact
T: **+44 207 9207500**
W: **www.native-instruments.com**
Tech Req
PC: Windows 7 later; Intel® Core™ 2 Duo or AMD Athlon 64 X2
Mac: OS X 10.9 later Intel® Core™ 2 Duo
4 GB RAM (6 GB recommended)

Key Features

- 88-note keyboard
- Features Komplete Select bundle of 10 plug-in titles worth £850
- NKS standard opens KK up to other developers
- Features Light Guides, Native Map, Smart Play
- Size (mm): 349x126x1389
- Weight: 14.4kg

There are some products that follow trends and some that create them. Komplete Kontrol definitely sits in the latter camp, and since its release in both software form and the S-Series keyboard range, it has set the bar, not just for controller keyboards but for the very way that music production software integrates with hardware. And it's also helped the computer to be relegated to less than the main player in the recording studio.

OK, you might think that's over-stating the impact of this range, so a quick recap might be in order…

Until a few years ago, the computer was the dominant force in music making. Native Instruments itself was one of many companies producing music software that could do everything, and I mean *everything*. However, a combination of software piracy, amazing new and colourful gear, a shift back to analogue, and the sorry fact that people were starting to mix with their eyes rather than their ears has meant that hardware has made a glorious return.

Ableton's Push and NI's Maschine have married the old software to this new world and simultaneously helped pull people's faces away from their computer screens. And just over a year ago Komplete Kontrol promised the same for the keyboard player – and thus the broader playing world at large. Komplete Kontrol marries a great piece of hardware to possibly the finest music production bundle out there: NI's Komplete collection (now at v10). The Komplete Kontrol software offers a shell-like interface, while the Fatar-made keyboards replicate the software in hardware form.

I say again: *replicate the software in hardware form*. 15 years ago, I'd have been happily telling you the opposite was true in the studio world. Crazy!

So anyway, with KK software you can dial up anything in Komplete and Kontakt, all from your S-Series keyboard via preset type or list. You can step through the presets and control the most important parameters via the rather great Clear View screens. The best bit is that everything, right down to the mult-coloured key ranges that have become Kontakt's trademarks, is now replicated on the actual hardware keys of the keyboards by way of the S-Series' Light Guides.

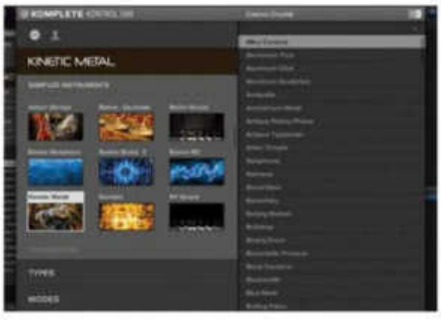
It's hardware that does software, it's multi-coloured and striking, and it keeps your head focused on what you are playing rather than what your mouse is clicking. It's *so* 2016!

Push and Maschine **pulled people away from computers.** Komplete Kontrol does **the same for keyboard players…**

It's also brilliant and Komplete Kontrol began, or at least helped chivvy along, a revolution in hardware and software integration that Akai has followed with its Advance range, Push 2 looks like maintaining for Live and Arturia, Novation and many others also have a hand in.

Which brings us nicely to…

With everyone jumping on the bandwagon, though, NI has not rested on its laurels and has made several important updates to the Komplete Kontrol philosophy over the last year.



1 MAIN BROWSE SCREEN
Press Browse in the hardware and you'll be presented with all of the plug-ins you have (and annoyingly some that you don't). Select here…



2 KOMPLETE INSTRUMENT
Load in your Komplete Select instrument – in this case Massive – and show the Plug-in panel to reveal the control assigned to the Clear View rotaries



3 OTHER PEOPLE'S PLUG-INS
Load in other plug-ins via the drop-down menu, but don't expect them all to be NKS-ready just yet. They will play, but you won't be able to control all of them via KK.

This includes third-party support, with the all-new Native Kontrol Standard (NKS) essentially meaning that the KK software and keyboards can be opened up to the VST community, so we're not talking about hardware integrated with just Komplete but potentially a lot more developers. So far, Heavyocity, ProjectSAM, Arturia, Spitfire Audio and Sonokinetic are just some of the big guns who have signed up. We'll be looking at how Komplete Kontrol works on third-party software as we review it (look out for the Arturia V collection update soon). For now, we'll cover what else you get with the software and the more immediate bonus: £850 of instruments within the all-new Komplete Select bundle.

Needless to say, this takes advantage of all of the S-Series' hardware's integration features while also offering a great selection of Native Instruments' own software line-up. It includes personal favourites Retro Machines, Monark and Massive, but there are some other choice titles here, including The Gentleman (piano), Drumlab and Vintage Organs – a little bit (actually quite a lot) of everything to show off what the Komplete Kontrol 1.5 software can do.

The hardware

So that's the software, but we're not finished. Testing the new 1.5 update required a Komplete Kontrol S-Series keyboard, so we took delivery of the brand new S88 keyboard and are including that in this test, too – to be rated separately.

Hardware-wise, the all-new keyboard is 'the biggie': 88 notes of fully-weighted, hammer action keys and touted as the ultimate keyboard for the ultimate controller range. The keyboard is identical in format to the others in the S- range in that all the action takes place in the centre bar – the two multipurpose touch strips on the left. There are Browse and Cursor buttons on the right to navigate through the KK software and eight Clear View screens and rotaries in the centre. There are performance keys, arpeggiator controls and the transpose keys to the left of these, and that is it. If you have any of the existing Komplete Kontrol S-Series, you will be at home here. If not, here's a quick recap of my previous review to explain that all important integration.

To use the S88 with Komplete Ultimate 10 is one of the best experiences in music production



Look closely and you can see which companies have already signed up to use the new NI Native Komplete Standard

Perfect integration

Within Komplete Kontrol you get access to all of your Komplete instruments (and now other plug-ins) and you can select sounds via the instrument title and then focus on preset type and select that way. The beauty is that all of this can be done via the hardware controls, so you can be away from the computer screen and more focused on your playing and recording.

You can load up the Komplete Kontrol software standalone or as a plug-in. The integration then dramatically swings into action as the most/important parameters of whatever sound you have dialled up are mapped (via Native Map) to the Clear View screens. I can't stress how cool this is. They are designed in such a way that the hardware/software combo almost mimics a hardware experience, so suddenly that FM7 preset you have always loved becomes an FM7 preset, which is easily and dramatically tweaked. The software instruments, therefore, come alive as not only preset selection is made easier but also editing, mapping, tuning and performance, all done via hardware, so negating a lot of – but not all of – your mouse clicks.

On that score, don't think that this by any means frees you of your computer completely – you will still need to load up the instruments in whatever DAW you use and, of course, work in that software, but the hardware is more than capable of handling your Komplete duties and can also load in other plug-ins. We had G-Force's excellent Oddity 2 loaded up, and while not all of the KK controls are mapped to certain plug-ins, more will doubtless sign up to →



the NKS standard. Back to the hardware, and the new S88 certainly feels its cost. It is pricey – a full £300 more than the 61 – but the keys will be attractive to proper players. They are fully-weighted, slightly heavy compared to the action on the Nord Stage 2 I also have in the studio for testing, but far more respondent than the 61-note S-Series I also have. Whether it's £300 extra worth paying is, I'm afraid, a decision you will have to make, as this depends completely on your playing ability and needs.

Konclusion

We've reviewed the new Komplete Kontrol software and S88 keyboard together, as they are obviously designed to go together, but you can, of course, choose any of the four keyboards now in the range, and anyone who has already invested in Komplete Kontrol can download Komplete Select for free, so get to it!

The new software is really all about NKS integration and the instruments you get from the off with Komplete Select. With both additions, you will be enjoying a much more integrated package and one of the best hardware and software set-ups out there. I say 'one of' because, of course, NI's own Komplete 10 software bundle is even better, and should you want the absolute ultimate in that arena – the appropriately named 'Ultimate' – it will cost you £579 over and above whichever S-Series keyboard you opt for. I have to say, though, that it is worth it, as you get hundreds of GB of the best instruments and content around – literally everything you should ever need for music production. Komplete Ultimate is also what the S-Series is designed to work with, so as good as Komplete Select is, this is what NI's designers had in mind with the S-Series keyboards – and to use the S88, Komplete Kontrol and Komplete Ultimate 10 is undeniably one of the best experiences in music production (I upgraded to v10 for this review and have to say it is staggering and very easy to install – Ultimate has never been so appropriate a name).

However, we're also going to mark the all-new S88 in its own right, as it comes with one or two caveats which we've already touched upon. It now costs a whopping £300 more than the 61-note, which puts the 88-note out on a limb a little price-wise.

So, while I love it – and I absolutely do – you may find those 61 notes enough, especially for £300 less. Personally, I think it's a bit steep a gap, or that perhaps the 61-note now looks even more attractive. Having said that, these 88 notes are weighted and seeing Light Guide across them in action in your studio is something else to behold. So if you are a player, and have a few quid, this is the one to get.

Either way, one of the range should be an even more attractive option, especially with the world and his wife now invited to the Komplete Kontrol party and £850 of software to tuck into when you arrive. **MT**

We used the S88 as the centre-piece of the *MusicTech* Christmas party decorations…

Alternatives

Where do you start? In terms of controller keyboards, there are stacks to go for. I've had some great experience with the Alesis V and VR ranges and Korg's Taktile models, but for more integration the Arturia KeyLab range has been updated and includes a whole range of that company's classic synth heritage. The closest to the KK experience, though, is the Akai Advance range, which includes VIP software that really gives you the hardware and software integrative experience.

MT Verdict KK S25-61

+ Great new prices
+ Komplete Select is amazing and a real bonus and advert for the rest of the Native range
+ NKS could become the new standard in integration
+ The Komplete Kontrol software opens up your instruments in a hardware-like way
+ The scale and arpeggiator sections are both excellent
+ Light Guide keys. Come on, what's not to like?!
+ Used with Komplete Ultimate, this really is the ultimate hardware software bundle

- … but it will cost you £579
- You can't do everything in hardware (just yet)

The new prices, addition of NKS and Komplete Select make the S Series even better buys.

9/10

MT Verdict KK S88

+ Proper player keyboard makes this the ultimate Komplete Kontrol keyboard of the range
+ Just how cool are 88 Light Guide keys? Very!
+ Wider keyboard range opens up Kontakt instruments further
+ Again, used with Komplete 10 Ultimate and you have, well, the ultimate combo

- Keyboard may be a little heavy for lighter acoustic players
- Price is £300 more than an S61, so quite a bit more for the extra playing action

It's the ultimate keyboard in the Komplete Kontrol S-Series range, yes, but it will cost you. Get it with the optional Komplete Ultimate 10 and you really do have the best.

8/10

Pioneer



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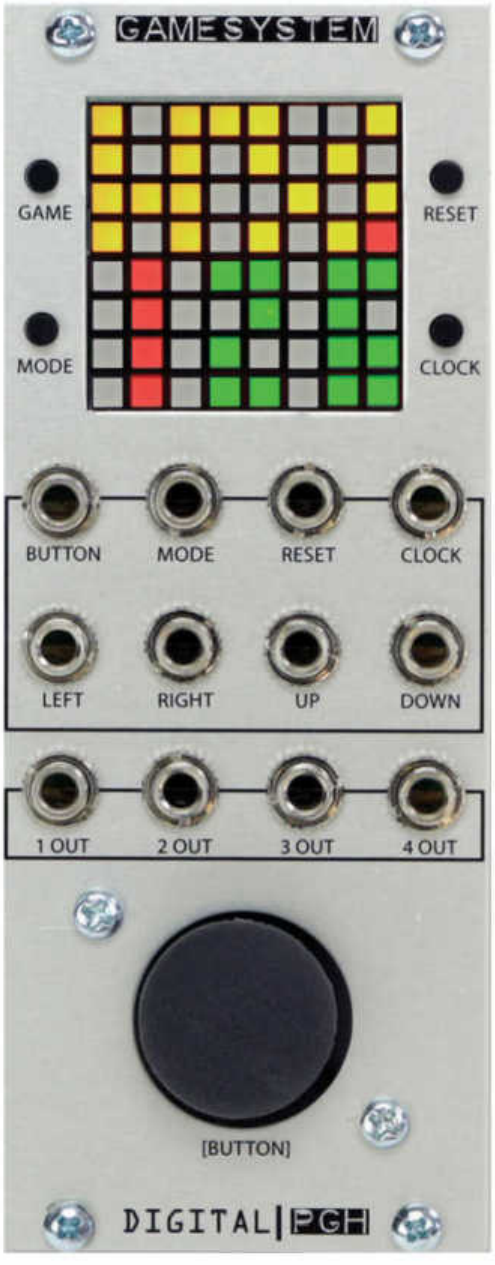
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Web **pittsburghmodular.com**

PITTSBURGH MODULAR
Game System

Pittsburgh Modular is one of the leading lights in the burgeoning hardware modular synth scene and its new Eurorack module is heavily influenced by the classic arcade games of yesteryear. *MusicTech*'s new modular guru **Dave Gale** aims for a high score

Key Features

- 6-mode multi-function Eurorack module
- Modes include Random CV/Gate triggers, sequencers and a clock divider
- 4 CV/Gate outputs (Game mode dependent)
- Size: 10hp
- Depth: 36mm
- Power consumption: 60-200ma (Game mode dependent)

Pittsburgh Modular is one of the more established players in the Eurorack market – itself a blossoming side of the musical equipment industry that seems to be growing at a rapid rate, with more and more bespoke brands and modules seemingly appearing by the day (all good in our book!). Pittsburgh already has quite a pedigree for finely built modules (from ADSRs to waveform oscillators) and complete synths (in the form of the System and Foundation units) but the 'Game System' is something a little less obvious and represents a new take on some established classics.

Billed as a 'Chaotic and CV Sequencing Arcade', the Game System immediately draws you in, with its beautifully bright 8x8 LED dot-matrix display. This is your main point of reference, with information being displayed here with pure 80s reverence. The pixelated font certainly takes a few moments to get used to, and, being modelled on an arcade game, you would be very disappointed if this module didn't come with a joystick; and sure enough, that's exactly what you find located at the bottom of the unit. This serves as an easy way to navigate the dot-matrix display, and also functions as an additional 'enter' button when pressed.

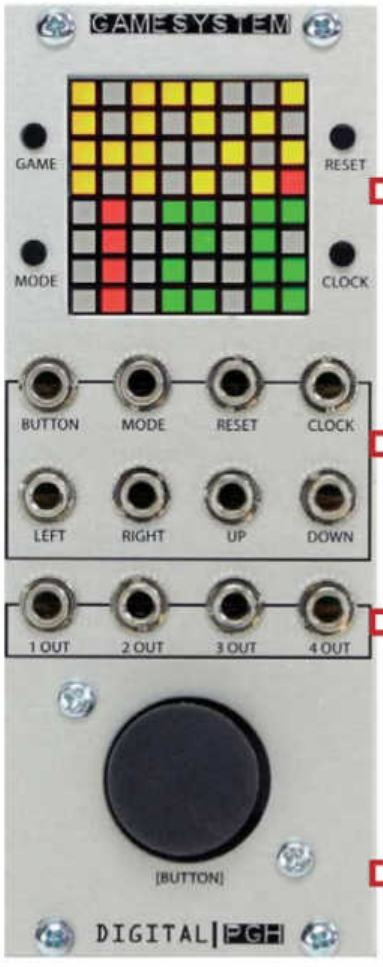
> The Game System immediately **draws you in** with its beautifully bright **LED dot-matrix display**

Game of choice

The Game System hosts six modes of operation, each described as a Game. As we'll detail, there are some significant differences that give the unit its distinct overall character.

Game 1, Meteor Shower, is a playable affair that manifests itself as a series of dots (meteors) raining down from the top of the display. As the meteors hit the ground they explode, causing a random CV and Gate to open. Using the joystick, you can pilot your 'spaceship' through the shower manually, but if you are unlucky enough to be hit by a falling meteor, the resulting explosion also causes a further CV/Gate to be triggered. If you find yourself busy elsewhere, there is an autopilot mode, allowing you to get on with other modular duties.

Games 2 & 3 are similar, both being sequencer-based. Game 2 is a 1-32 step CV and gate sequencer, while Game 3 is a four-channel, 16-step gate →



Either side of the display are global buttons, for choice of game and mode. The Clock button allows for division of the incoming clock.

CV control of the joystick is possible via 4 inputs, as well as CV control of global functions. The clock input allows for perfect synchronisation with other clock-emitting devices in your system.

Four generic outputs that swap CV, gate and clock duties, according to whichever game is being played. This will require re-patching, as you move between games, as the functionality of each game changes the mode of output.

The ubiquitous joystick allows for simple and fun movement around the dot-matrix display, and in the case of Game 1 you can pilot your spaceship to avoid the meteor storm!

sequencer, mostly suitable for triggering drums. This is where the Games System can get a little fiddly, with the requirement to navigate steps with the joystick. In the case of Game 2, note pitches are entered by raising or lowering the joystick, the desired note being indicated as a number on the matrix. I can't deny that at first I found this rather hard work, but once I was used to the form factor, I actually found it pretty fun to work with. The obvious lacking feature with both Game 2 & Game 3 is the ability to save a sequence. However, sequences do remain from one session to the next in non-volatile memory, and in this respect it is in line with more traditional step sequencers. You wouldn't be able to save using those either!

There are plenty of randomising options with this module and it is where this unit excels

Alternatives

For sequencing, the Tiptop Audio – Z8000 and Trigger Riot sequencers offer similar functionality to the Game System, albeit in analogue form. For random CV generating, the Music Thing – Turing Machine is considered a bit of a classic in modular circles. There are plenty of clock dividers on the market: the Doepfer A-160 is a low-cost solution, and the Pittsburgh Modular – Time Runner offers far greater functionality, if required.

Game 4, Time Traveller, is not so much a game as a clock divider. Your choice of division is chosen via the joystick, according to your placement on the display. However, unlike other clock dividers, it is also possible to create offsets and introduce random elements. It's functional and useful, as well as continuing the theme of unpredictability.

Game 5, Probability Machine, & **Game 6**, Euclidean Rhythms, are undoubtably my favourite games. The random nature of these two modes allowed me to lose myself in a cavalcade of ever-changing sequences, and in the case of Game 5, the ability to separate out two random CV channels allowed for some wonderful stereoscopic effects. In my view, all modulars should have at least one randomising module, as the patching implications are vast, even if they are restricted to pitch or filter cut-off frequency and, frankly, why not?

Conclusion

Within the six 'Games', there are plenty of randomising options available with this module, and it is undeniably where this unit excels. For the same price as a single-use, high-end module, this could be considered six modules for the price of one, although the inability to deploy more than one game at a time is something of a restriction. If you were considering this as a primary source of step sequencing, it might not be your first choice, but as a bonus to an already well-equipped module, the sequencers are useful and usable.

With the classic Pittsburgh build quality and the lure of the multi-coloured dot-matrix display, I have a feeling that modular users of a certain age, or eighties persuasion, will be very interested in this module! MT

Do you really need this?

This would be a superb purchase for anyone setting up a new small-to-medium sized system, catering for many uses under one roof, but may have less appeal to established modular heads who already possess that functionality elsewhere. If you are looking for a random CV generator, this should be up for consideration – less so as a primary sequencer. The addition of a clock divider is a very welcome added bonus.

MT Verdict

+ Innovative design
+ Aesthetically pleasing in your Eurorack
+ Plenty of functionality for the money
+ Excellent build quality
+ Extremely fun and quirky

- Some 'games' are a little fiddly in operation
- The display takes some getting used to

Packed full of CV/Gate randomising options, with plenty of possibilities for usage in even the most basic modular system.

8/10



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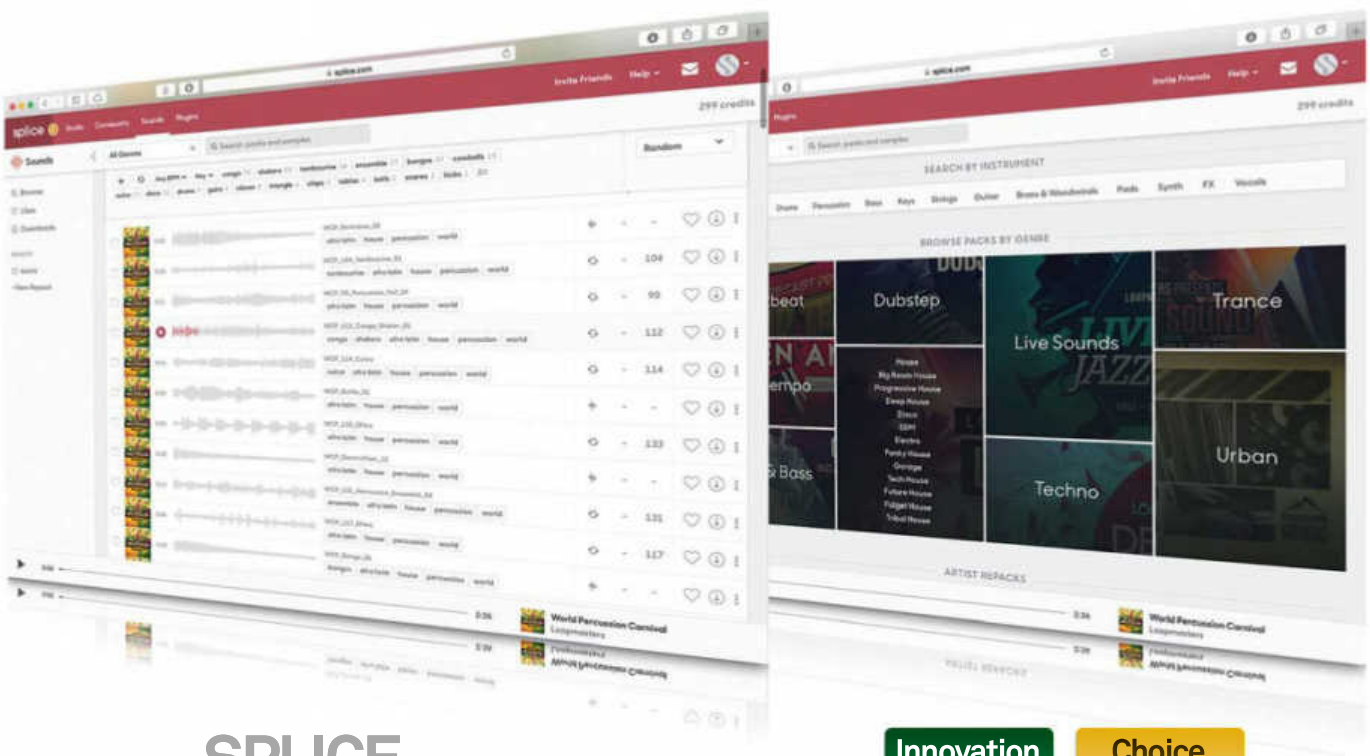
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SPLICE

Splice Sounds

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The days of paying for samples you never use could well be at an end. **Hollin Jones** explains how Splice Sounds could change your world…

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Key Features

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- Drag and drop straight to your DAW
- Extensive searching capability
- Artist-curated collections encode

Splice started life not all that long ago as a web service that allowed users of certain DAWs to upload their raw project data to the cloud and then collaborate with others. Or, store their own work in the cloud so they could open it on any computer to keep working on it. That free service is called Splice Studio, but the company has now created a different kind of service: Splice Sounds. Claiming to be a new approach to buying samples, it's the kind of thing that has become possible only in the last couple of years with advances in web and mobile technology.

So what is it?

Splice Sounds is an online catalogue of royalty-free samples – 700,000 and counting – from some industry-leading figures, companies and artists. Where it differs from conventional sample packs is that it is entirely database-driven yet friendly to use. The developers say that they found people complaining that they would buy a sample pack and end up using only a fairly small percentage of the sounds inside it. The others were effectively useless to them. Worse, frustration with this can lead some people to pirate sample collections, which is not hugely difficult if you're determined to do it. This is similar to the challenge faced by the recorded music industry, and Splice's answer is not unlike the way that Spotify or Apple have responded to people's changing music-buying habits – not to mention a way to try to discourage piracy.

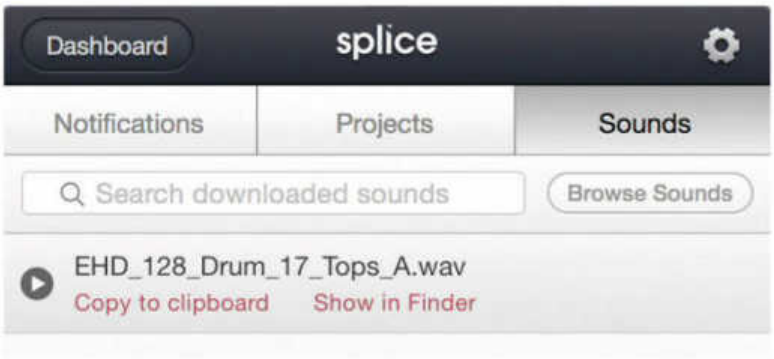
This limit is to stop people joining for a month and downloading the entire database before cancelling, which wouldn't be very fair. It will also probably have the effect of making you consider more carefully which sounds you really do want rather than just downloading thousands without thinking. If you do cancel, you keep the samples you have already downloaded but lose access to download any new ones. You can also choose to pay $13.99 a month and get 300 samples, though it's not currently possible to pay extra if you want to go beyond this in any given month.

> The idea, in short, is to **let people search**, audition and **buy only what they want**

The idea, in short, is to let people search, audition and buy only what they want. The problem of having to buy a 3GB sample pack to get the 300MB of samples you actually want is a real one, though it's not really the developers' fault. The only alternative to selling whole collections is to make a searchable, micro-payment driven online system. That requires a lot of work, but it's what Splice has done. You pay $7.99 a month, and for that you get 100 download credits, with samples costing one credit each.

The details

In order to download sounds, you have to install a small application, and this is the same one that is used for syncing DAW project data, though the two tasks are separate things. A folder is created on your computer where downloaded



The web interface is slick and user-friendly, making the search process within Splice a pleasure

files are stored, and you can audition and search them here, as well as revealing them in the file system. Files can be dragged from the Splice app straight into your DAW. You are encouraged to manage sounds in your online account via a browser and it's possible to create 'Repacks', which are essentially collections of sounds that you can manage manually: electro kicks, piano loops and so on. This works well, though collections don't seem to sync to your computer, so they're easier to manage online. The samples are downloaded when clicked, but any Repacks that you create online aren't mirrored as named folders on your computer, which would be a nice addition. Repacks can be shared online with other users, a bit like curating a playlist for Spotify, and Splice has some artists already doing this.

The process of searching for samples is really slick and benefits from a web interface that's very responsive, laid out clearly and easy to use. At the top level, you have multiple search options and you can search everything using keywords, or filter down by categories such as drums, percussion, pads and so on. Then there are genre-based categories: dubstep, house, techno and the like. Click into any of these and a selection of packs can be explored, each one curated and themed, and with a full demo track playable by clicking on it. From here, or from within a pack, you can filter down still further by selecting or deselecting tags at the top of the section. As well as the obvious tags, you get stuff such as one shots and loops, and the ability to filter by BPM or key. This all works extremely quickly and makes a lot of sense, which is vital if you're going to base your system on searching for specific sounds. The tagging seems thorough and the loading fast. This all works from mobile devices, too, and since you're signed into your account, stuff that you buy or organise on the move will be reflected on your studio machine as well.

The samples are excellent, as you'd expect with **partners like Loopmasters** and Prime Loops

For any individual sound, you get a preview button to play it, and triggering a sound will cause any other playing sample to stop, which is really helpful in saving time and confusion. You can flag samples, download them directly and add them to a Repack by using a shortcut or dragging and dropping. Selecting more than one sample illuminates a 'download all selected' type of button, and there's also a randomizer sort button that will show you a random selection of sounds if you like. The computer arrow keys can be used to move up and down sample lists and preview them automatically, which again will save you a huge amount of mouse clicking.

Sounds good

The samples are excellent, as you'd expect with partners like Loopmasters and Prime Loops providing a good chunk of the very varied and large library. The difference here is that you're much more likely to be able to find the stuff you want, and find it quickly, than if you were having to plough through hundreds of sub-folders on your computer. In the same way that you might not bother buying an album if it needed shipping from overseas, you would be much more likely to listen to it on Spotify. In the digital era, convenience is king and this applies just as much to music producers as to regular consumers.

Splice Sounds is a great idea and genuinely solves what has become a significant problem with the sheer number of sample collections on the market. Namely, how can you be sure you will use even half the sounds you're paying for? Piracy is an issue, too, and just like with online music streaming services and things such as Netflix, content providers are increasingly moving towards a subscription-for-access model. It's happening in the music tech world, too – look at EastWest's Composer Cloud, SONAR's subscription model and other developers such as Adobe's Creative Cloud. And people seem to be open to this approach, as long as the subscription price is reasonable and there are no penalties for cancellation. In the case of Splice Sounds, the pricing tiers seem very sensible when you consider the range of sounds on offer and the quality of the user experience. Expect to see more music technology go down this path. For now, Splice is leading the way for sample users. **MT**

Alternatives

The alternative is what's always been there, which is to buy conventional sample packs. There's nothing wrong with that, and some people may prefer it. You often get multi-format samples for example, with ReFill, REX and ACID versions of the same sounds, which you don't yet get with Splice. You also get immediate access to everything you have bought, with no download limit. The two have fundamental differences of approach, however, so they're not directly comparable.

MT Verdict

+ Excellent way to pay for just the samples you need
+ No wastage
+ Very well designed
+ Extremely slick and responsive
+ Enables work across devices
+ Easy to search
+ Tagging is great
+ Keep the samples you download
+ Library expanding constantly
+ Can curate collections online
+ Great variety and quality of samples and loops from some big names
+ Priced sensibly

- WAV format-only at present
- 300 downloads per month is the current limit
- Repacks don't sync to your computer

This could be the future of buying and using samples. Smooth and easy to use, with an ever-expanding selection of sounds.

9/10



BLACK LION AUDIO

B173 mic preamp

Black Lion Audio's B173 is inspired by one of the best solid-state mic preamps ever made. **John Pickford** puts it to the test...

Hot on the heels of our review of Black Lion Audio's B12 mic pre, based on the API 312 from the 1970s, comes this, the B173. No prizes for guessing that this is the Chicago-based company's take on the Neve 1073, probably the most revered solid-state microphone preamp of all. We've tested several 1073-type preamps in recent times, including Neve's own latest incarnation of its original design, the 1073 DPX.

This new, single-channel design appears as a 1U half-rack unit, delivering up to 80dB of mic gain. It's not intended to be an exact clone of a 1073, so there's no take on Neve's novel Mic/Line gain-control configuration. There would be no point, as this new unit does not have a line-level input. It does, however, feature a DI instrument input on the front panel. Other front-panel controls comprise a chunky 12-position rotary switch for input gain, a smaller rotary pot to adjust output level and push-button switches to engage phantom power, invert phase and select DI input. A power switch is sensibly located on the front panel and a distractingly bright blue LED illuminates to indicate that the unit is switched on; LEDs are also provided to show when phantom power is engaged or when the DI input is selected.

Like the B12, back-panel connectors are provided for XLR microphone input and a balanced TRS line output as well as an internal chassis ground terminal and a socket for the supplied wall-wart power supply. We made the point when reviewing the B12, but it's worth repeating here: the absence of XLR output and provision of wall-wart power supply indicates that the designer has chosen to allocate his budget to quality components rather than pro-looking connectors. Those high-grade internal components include a CineMag input transformer and Edcor output transformer, with the discrete design operating in Class A mode.

Details

Manufacturer **Black Lion Audio**
Price **£446**
Contact **Unity Audio 01799 520786**
Web **www.blacklionaudio.com**

Key Features

- 80dB maximum gain
- CineMag transformers
- DI input
- Phantom power
- Phase reverse
- External power supply

Sound is king

Black Lion Audio doesn't go in for funky retro-chic, preferring to stand by its motto of 'Sound is King', with which we fully agree. It's ironic, then, that the utilitarian black dials are reminiscent of those found on old Pultec equalisers that pre-date the 45-year-old Neve design by almost 20 years. These controls feel solid, as does the unit as a whole; build quality is excellent.

As with all of the microphone preamplifiers we test, a variety of distinctive microphones were used on familiar sources to assess the unit's true character. And, like authentic 1073s and other vintage solid-state designs, the B173 certainly has bags of character; it's not an ultra-clean, transparent design. For some engineers, particularly those who like to hear the individual character of their microphones, preamp character translates as unwanted colouration, and there can be no doubt that the B173 is an extremely colourful preamp.

Our first test involved using an AKG C414 on the studio's Epiphone acoustic guitar. We recorded three passes, first using the B173, followed by our 1980s DDA console and then another Neve-inspired mic-pre (Golden Age Project PRE-73 Jr) also in for review. It was immediately apparent that the B173 was brighter than the other two, producing a rather obvious, spot-lit treble response. Although the upper frequencies were prominent, the unit delivered a firm and robust bottom-end, with a nicely thick and warm low-mid response. In this respect, the B173 showed its pro-audio credentials, with a full-bodied tone that evades the mean, flat and lifeless sound often produced by the cheap amplifiers found in budget mixers. The extreme upper frequencies were reasonably extended, although masked somewhat by the exaggerated response in the treble region below 10kHz. This gave the acoustic guitar an overly clangorous sound compared to the other preamps.

Upright piano, recorded with our valve Neumann U 67 fared better, the B173's glaring top-end adding an edgy presence to the smooth and dark nature of the microphone. We did notice, however, that while we were able to add some air at 16kHz on our DDA channel, the B173 didn't respond so well unless we also used some corrective EQ cut to tame the treble

In-use tip

The treble-heavy nature of the B173 makes it a good choice for adding some brightness to dull signals or recording instruments that often need some top-end boost. Using our insensitive Coles 4038 ribbon mic above a 1960s Ludwig drum kit, we ramped up the input gain to near maximum and eased back on the output level to gently overload the transformers, creating a touch of musically pleasing saturation. The result was a full, rich and lively sound with plenty of transient snap and punch.

edge. Things got much better when we turned our attention to drums. Using a pair of Coles 4038 ribbon mics set up in the classic Glyn Johns method, the brightness of the B173 brought out the snap and attack of the kit, especially when we dialled in plenty of gain and eased back on the output level to generate some gentle saturation. With this in mind, we later employed the B173 in conjunction with a Beyer M201 on a snare drum track when recording a multi-mic'd kit. This combination worked wonderfully, sounding fat, punchy and crisp. We used the Beyer M201/B173 combination again to record an electric lead guitar overdub with similarly excellent results, reminding us that when the right tools for the job are used in the first place, very little tinkering is needed later on.

Finally, we tested the DI input by plugging in our vintage Vox Continental organ. Again, we were aware of a bright presentation not found when using our reference DI input on our valve-driven Rooster 2 mic-pre, although this was not unduly harsh or unpleasant.

Alternatives

Golden Age Project's PREQ-73 (£329) is a 1073-style microphone preamplifier employing a Carnhill input transformer and featuring two bands of shelving EQ. A smaller version, the PRE-73 Jr (£189) offers the same sound without the equaliser. Warm Audio's WA12 (£349) is based upon the API 312 amp, using custom-designed CineMag transformers to provide its own distinctive vintage flavour.

As long as the B173 is used in situations where a boost in the upper frequencies is desirable, recording drums for instance, the unit will shine with its warm, full-bodied lower registers and ample treble energy. Engineers who want their microphone preamps to be clean, neutral and transparent should avoid this unit, while those who value a range of characterful equipment to provide a broad palette of tonal colour will welcome it into their arsenal.

Although the B173 is a characterful, vintage-style preamp, it doesn't have an authentic Neve sound. The GAP PRE-73 Jr, with its Carnhill transformer, sounds much closer to a real 1073. In its favour, Black Lion Audio states that while it originally planned to produce a 1073 clone, it decided to "Pursue our own unique design that combined both vintage and modern characteristics". To that end, it has succeeded. The B173 offers vintage solid-state sound in a modern, compact package. **MT**

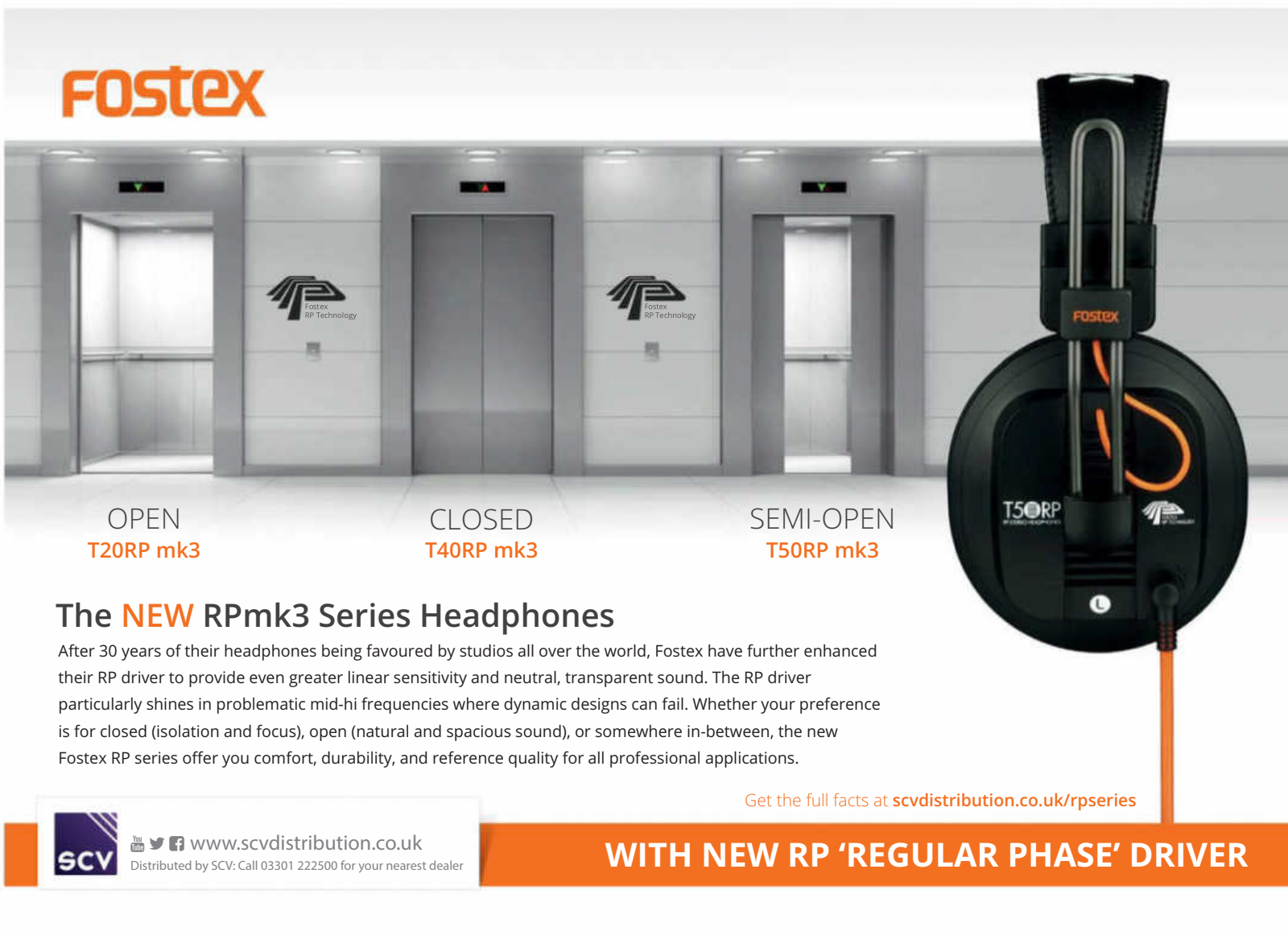
MT Verdict

+ Warm low end and punchy mid frequencies
+ Vintage solid-state character
+ Quality internal components
+ Excellent build and finish

- Bright treble response
- No HPF or padding
- Distracting neon blue power LED

The B173 has a distinctive, vintage solid-state sound that is big and punchy with a bright treble response. It's not the smoothest microphone preamplifier on the market, however its edgy nature can add bite and presence to dull signals. Potential buyers should audition this unit rather than relying on its 1073 credentials as an indicator of its character.

8/10



Sonnox

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www.sonnox.com



Excellence 10/10 MusicTech

FABFILTER Pro-C 2

FabFilter has updated its Pro-Series compressor. **Mike Hillier** finds out if it really is fabulous

Details

Price **£114**
Contact **info@fabfilter.com**
Web **www.fabfilter.com**
Minimum System Requirements
PC Windows XP or later, AAX, RTAS or VST host
Mac Intel Processor, Mac OS X 10.5 or later, AU, AAX, RTAS or VST host

Key Features

- Eight compression styles
- Sidechain EQ
- Smooth lookahead mode
- Intelligent auto-gain
- Up to 500ms Hold
- Custom knee

FabFilter Pro-C is now the second plug-in in the company's Pro range to get a major update, following on from the incredible update to Pro-Q last year. The new version of the FabFilter's compressor adds a considerable number of features to the already popular plug-in, including five new compression styles, a vastly improved side-chain EQ, and a new Retina-display optimised interface, which can be scaled from small to full-screen.

Eight in one

Probably the biggest single improvement in Pro-C 2 is the new user interface; even in its default setting it is larger and easier to navigate. FabFilter has embraced user interface design like no other developer, making the most use of what is possible with plug-ins instead of sticking to emulating old designs. There are no skeuomorphisms here, no rack screws, paint scratches or needle-based VU meters. Instead, the meter shows a moving waveform as it passes through the compressor up against a graph of the gain reduction, letting you see at a glance what your attack and release settings are doing to the gain reduction. Against this, another graph shows the compressor ratio and knee, again enabling you to quickly set these visually against the waveform. There will be those who say visual mixing is disabling, and that you should use your ears, which is of course true, but knowing you can get 99% of the way there visually is a great help in getting to the settings you want quickly.

Pro-C 2 has eight different compressor models, of which five are completely new in Pro-C 2. The Mastering compressor works very quickly, while producing very little harmonic, making it very useful as a clean, clear vocal compressor when artefacts have to be avoided, as well as on percussion. On the opposing front, the Pumping model has been designed with subtlety thrown out of the window. This model is great when fed a side-chain kick for those over-the-top pumping sounds most commonly associated with EDM. Perhaps two of the most useful new models, though, are the Bus and Punch models. Punch has a rich tonality, which lends weight to anything fed through it, while Bus applies that final gloss to a mix. The Vocal compressor has been designed with automatic knee and ratio, but is the only one of the new models we haven't taken to immediately, perhaps because we got great results out of the Punch, Mastering and the three old models on vocals.

Alternatively

Compressors are a dime a dozen, but something with this kind of flexibility, capable of anything from transparent detailed control, through to characterful glue, is rare. Sonnox Oxford Dynamics is probably the closest competition, with three different compression types and some powerful additional features.

The best is yet to come

While the five new compressor models are the easiest new features to get your head around, the real strength of Pro-C 2 comes from the subtle touches that FabFilter has added. It might not seem like much at first, but the Hold feature added to the Attack and Release characteristics – something more commonly seen on gates than compressors – has made its way onto more tracks. In fact, we've been using it on all our recent video tutorials as a means of consistently ducking the audio track under the voiceover. We also recently used it on the hi-hat channel in a mix to both tighten the hat choke in response to the kick and to control bleed, with the end result being more controlled and groove-based than anything we could have got with a gate.

Another of the improved features is the sidechain, which previously had high- and low-pass filters. It now has a mid-band with selectable shapes, based on Pro-Q. You can, like before, add high- and low-pass filters, but you can also shape the filters as you see fit, and use the mid-band to add a bell curve, notch, shelf, or even a tilt EQ. We described the advantages of using fully-featured EQs in the sidechain in a previous workshop, "Digging Deep Into The Sidechain", but it's great to see one so prominent in a compressor like this. The actual response of the compressor once you've changed the sidechain EQ is sometimes hard to work out, but as a rule of thumb any frequency you boost in the sidechain will be reduced more by the compressor.

As always, FabFilter has managed to wrap an incredibly powerful tool into an easy-to-use and intuitive user interface, which makes getting great sounds simple. The original Pro-C got a lot of day-to-day use on our sessions, but it was always the compressor to reach for when you just needed a job doing. Pro-C 2 can handle anything you throw at it, and is already pushing far more expensive compressors aside. **MT**

MT Verdict

+ Flexible compressor
+ Easy to use
+ Great user interface

Pro-C 2 is set to become a staple of many professionals' toolkits. Everyone needs a good compressor, and there are few as good as this. A future classic.

10/10



NATIVE INSTRUMENTS

Traktor Kontrol S5

The mighty Traktor platform ploughs onwards with a new all-in-one controller and interface from Native Instruments. **Hollin Jones** takes the S5 for a spin…

Details

Price **£579**
Distributor **Native Instruments**
Contact **Via website**
Web **www.native-instruments.com**
System requirements **OSX 10.9 or higher Windows 7 or higher**

Key Features

- USB audio interface with XLR and RCA outs
- 24-bit, 48kHz operation
- Mic or phono inputs
- 4-deck Traktor Pro control
- Access Stems and Remix decks
- Two full-colour displays
- Touch strips
- Touch-sensitive encoders
- 16 colour-coded pads
- Traktor Pro included

Around a year ago, NI released the Traktor Kontrol S8. The biggest and most comprehensive DJ controller they'd built, it even included full audio I/O capabilities, making it an all-in-one DJ solution. The only thing was that all that capability took up space. Not that it was huge, but it wasn't what everyone would call portable. Listening to customer feedback, NI realised that some users wanted a similar device but without all the bells and whistles, and easier to carry around to gigs.

The company has come up with the S5. It has many of the tools you'll find in the S8: some modified or rearranged, but in a smaller package. It comes with Traktor Pro 2, as well as power and USB cables, and appears automatically as a controller device to the software and as an audio I/O device to your Mac or PC. You get two decks, each with a deck select control allowing access to up to four as in the software, and a mixer section in the middle. Weighing 3.7Kg, it's surprisingly lightweight but as solid as we've come to expect from NI.

Hook it up

The S5 is designed to act as your audio in and out device as well as a software controller, and has a good selection of ports. On the front edge is a headphone output with both mini and regular jack options so you won't have to bother with adaptors. On the rear, the main outputs can be sent either via dual XLRs or RCA outputs and there are stereo jack outs for a booth feed too. As for inputs, there's a mic input jack and aux left and right inputs for connecting external sources. A USB port handles audio and MIDI to and from your computer.

In terms of sound, it operates at 24-bit/48kHz and allows for four-channel mixing from the Traktor software. The mixer section has level faders for each of the four decks, as well as a crossfader. Each channel then has identical controls comprising cue on/off, switchable filter, three-band EQ, level meter and a gain control. In the centre, you can control master, cue, booth and cue mix volumes as well as tempo, and there are small master level meters. As a mixer, it's easy to understand and colour-coded backlights make things simple to follow.

Each deck has a set of controls, starting at the top with touch-sensitive effects knobs. These can be touched to reveal settings and modified to select and change effects. The high-resolution screens are crucial to performing without looking at your computer, and they work brilliantly. Controls to either side let you choose what you view and edit as well as seeing beat grids, track names and other information. The Browse and Loop buttons are also touch sensitive, invoking the relevant view with a simple tap.

Mash it up

Below this is the Performance section, a grid of eight pads per deck, used for various tasks, depending on which mode is active: hotcue, freeze, remix or flux. In fact, these now extend to controlling Stems, NI's new four-track file format. The pads automatically map to Stems when a Stem file gets loaded and you can mute, mix and add filters and effects to Stems with the pads and encoders to remix your music in real time. Performing using Freeze, Flux and other modes is also slick and intuitive. You don't need to be an expert to use this stuff, though there's potential for very complex performances. The touch strip handles navigation, scratching or needle drops depending on your mode, and the transport controls at the base deal with playback. A Shift key allows access to certain secondary functions, making up for the slightly smaller number of physical controls on the S5.

Got 5 on it?

The S5 is perfect for those who want the combined controller and interface function of the S8 but in a more compact package. You get slightly fewer physical controls and smaller I/O, and there's no standalone mode for the mixer, but this is still enough for all but the most demanding DJs. Crucially, it's another into NI's Stems world and has the amazing 'hands-off' workflow that comes with the visual feedback system, touch-sensitive controls and integrated audio interface. You can do far more with it than using the mouse and a copy of Traktor on a computer. For a lot of DJs, this will be the perfect balance of power and portability. **MT**

MT Verdict

+ Really portable
+ Much of the power of the S8
+ Touch-sensitive controls are excellent
+ Very well-designed workflow
+ Real-time effect control is fantastic
+ All-in-one controller and interface solution
+ Access all of Traktor's performance modes, including Stems
+ Far better access to controls than the software and mouse
+ Clever use of controls for different modes

- No MIDI I/O
- Mixer doesn't have a standalone mode like the S8

Delivers almost all the punch of the S8 in a more compact package. The S5 is the perfect all-in-one DJ solution for the performer who's on the move.

9/10

YAMAHA

reface

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The Spirit of Analogue



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TOONTRACK

EZX Post-Rock

Getting an authentic post-rock drum sound was a hassle – until now. **Hollin Jones** tries out Toontrack's new EZX Post-Rock collection

Details

Price **£41.95**
Distributor
Time and Space
Contact **Via website**
Web
www.timespace.com
System requirements
EZDrummer 2 or Superior Drummer 2.4.0

Key Features

- Standalone or plug-in
- Stereo or multiple outputs
- Recorded in Sigur Rós's studio
- 4GB content
- MIDI patterns supplied
- 5 kits
- 11 mix-ready presets
- 6 custom percussion pieces

It's common practice in the music technology world to build a product that can then be expanded with sound packs. Not only does it mean you can extend the scope of your instrument without re-engineering it, it also allows your customers to buy only the content they need. EZX Post-Rock is Toontrack's 26th expansion pack for EZDrummer and Superior Drummer.

Post rock is about two decades old as a genre, a uniquely cinematic style of music, very often instrumental and composed with dynamics and textures as much as verses or choruses. Although atmospheric, it usually has a decisive rhythm and is slow- to mid-tempo. Sometimes it's gentle and other times ear-splittingly loud.

Rock out

One of the first post-rock bands to be recognised as such were Mogwai, but a slightly different stylistic approach was taken by Icelandic band Sigur Rós, and it's in their studio in Reykjavik that this collection was recorded. In a world where we can suffer from overload of the sheer amount of sounds available, these more niche collections that sample either specific equipment or a specific location or both are becoming more popular. The recordings were made inside an empty swimming pool – the kind of acoustic environment that really is unique, and has lent its character to recordings by Spiritualized, Jon Hopkins and of course Sigur Rós.

> The recordings were made **inside a swimming pool,** a **unique acoustic environment**

The idea here is that you can get the same character for your drums without having to go to Iceland in order to do it.

The collection runs in EZDrummer 2 or Superior Drummer 2 and as a plug-in or a standalone application. Weighing in at just under 4GB, it isn't massive but can be relocated to an external drive if you have limited space on your boot drive. You get four complete kits sampled with sticks – Rogers, Tama, Yamaha and Sakae – and one kit sampled with brushes, felt mallets and a 'snare off' option. In addition, there are six custom percussion pieces and a decent selection of MIDI grooves that you can use to trigger any of the kits. In terms of presets, you get 11, comprising the various kits processed in different ways. You can customise and save your own kits, with the software's interface making it easy to swap out individual instruments and tweak the mix using the onboard mixer. There are effects too, though users of the more entry-level EZDrummer can only change settings, not customise the effects chain.

There's a huge sonic difference between rock and post rock, even though the names might suggest otherwise. The drums are an expressive instrument in their own right, playing as much of a role in the development of a track as any other instrument. In straight-up rock music, they're often there just to keep the track driving along. As such, the drums here have more character. Great care and attention has gone into the recording, but these instruments have bags of character purely in themselves. So although there are effects used, they tend to enhance rather than smother the natural feel of each individual drum.

Iceland, baby

The drums are earthy, organic and powerful, and instantly recognisable as the sound of bands like Sigur Rós. You can mix onboard, or if you're in plug-in mode route any of the 16 channels out into your DAW's mixer to get control over things such as adding third-party plugs. As well as a good selection of conventional drum types, you get bowed cymbals, a singing bowl, trash gong and even footsteps and piano percussion sounds. So there's more to it than kick, snare, cymbals and toms, and these additions bring an extra layer of atmospherics and flexibility.

This collection captures that cinematic, epic post-rock sound and puts it in a format that makes it easy to program your own beats. It's easier than flying to Reykjavik with your drum kit. **MT**

MT Verdict

+ Gives you that authentic post-rock sound
+ Beautifully crisp, sonorous drums
+ Great presets
+ You can swap out any sound
+ Decent MIDI patterns supplied
+ Onboard mixer
+ Perfect for scoring

- Can't add or remove effects modules in EZDrummer

A great-sounding and affordable expansion pack that truly captures the epic, windswept character of post-rock drums.

9/10



GOLDEN AGE

Project PRE-73 Jr microphone preamplifier

Choice 9/10 MusicTech

This little brother of the PRE-73 is a colourful vintage-sounding preamp. **John Pickford** takes a listen…

Details

Price **£189**
Contact **Golden Age Project +46 322 66 50 50**
Web **goldenagemusic.mamutweb.com**

Key Features

- Vintage-style Class-A Electronics
- 70dB of available gain
- High impedance instrument DI Input
- Insert jack for inserting auxiliary equipment
- Switchable phantom power and invert polarity
- Combo XLR/TRS input jack
- Separate output XLR and TRS jacks

The big brother of this diminutive preamp, the PRE-73, has won many friends in the audio industry thanks to its Neve-like sound quality at a price far lower than that of a genuine Neve product. We were most impressed with the all-singing, all-dancing PREQ-73, which offers all the features of the standard model along with two bands of sweet-sounding equalisation. Like the larger units, this junior model delivers up to 70dB of 1073-style microphone preamplification, while doing away with features that some users might not need. The first thing we noticed, apart from its unusual proportions, is the simplified input gain rotary switch. Whereas the other models feature the unique 1073-style Mic/Line switching arrangement, the Junior offers mic gain only in 5dB steps from 20 to 70dB. A continuously variable Output control pot is provided, along with an instrument DI input. Three plastic push-buttons are provided, which engage the DI input, 48-volt phantom power and phase invert; a single LED light indicates the presence of signal passing through the unit. At the rear is a combo XLR/TRS input, as well as separate outputs for XLR and TRS jacks. An insert jack is also provided to allow the connection of an auxiliary unit such as an equaliser.

External power is provided via a 24V wall-wart supply, which some may see as low-budget, however top-quality components are used internally.

Like the PREQ-73, the Junior feels solid and weighty, despite its small proportions which allow for four units to be mounted in GAP's 19-inch rack kit, the UNITE MKII. Inside, the discrete components are laid out neatly, with the superb Carnhill input transformer on full display. Carnhills are widely used in 1073-type units and contribute to the Junior's vintage sound. It's not the most transparent transformer, but it has bags of character and responds well to being driven hard. The Junior's circuit is quite straightforward in a traditional style, with just three transistors used in the gain stage and three in the output stage; the output transformer is driven by a 2N3055 power transistor running in pure Class-A mode.

We used the little unit with a variety of microphones, ranging from our vintage, valve-driven Neumann U67 condenser to our Shure SM57. With 70dB of gain on tap, we were able to use our insensitive and power-hungry Coles 4038 ribbon mic on a gently picked acoustic guitar without generating too much noise. In fact, even though the unit errs on the side of musically enhanced harmonic distortion, much like the classic Neves, it operates with an impressively low noise floor.

As with any preamp, the Junior offers the cleanest tones when the output is set to maximum with modest input gain. Dialling in more gain to drive the input transformer harder, while easing back on the output, produces a more saturated tone in keeping with the unit's vintage character. We used this technique recording a rather shouty male rock vocal, the added grit lending the sound a biting edge that still retained warmth in the lower registers. Compared with the mic pres on our 1980s DDA console, the PRE-73 gave a more full-bodied sound with plenty of low-end heft. However, while the top end is nicely extended, the Junior couldn't quite match the silky high frequencies of our reference valve units. The DI input is useful and sounded good enough with our old 1960s Vox Continental organ that we didn't bother feeding it through an amplifier.

The PRE-73 Jr is a great, affordable way into the classic 1073 sound, big and punchy – some might say larger than life – but with a musical heart. Other preamps may offer more in the way of features, but that's missing the point. If all you require is good, simple microphone preamplification with a vintage solid-state sound, the PRE-73 Jr is well worth auditioning. **MT**

Alternatives

The same great sound with added two-band EQ is available with GAP's PREQ-73 (£329). For a different type of vintage solid-state sound try either Warm Audio's WA12 (£349) or Black Lion Audio's B12A (£372). Both units are based on the classic API 312 design, arguably Neve's main competitor back in the 1970s.

MT Verdict

+ Big, warm and punchy sound
+ Vintage solid-state character
+ Excellent, sturdy build quality
+ Ease of use

- Not neutral or transparent
- Basic features

The PRE-73 Jr offers all of the classic 1073-style sound of its bigger brothers at the expense of a few extra features. The size and price mean that four units can be used in a single 19-inch rack mount, providing four channels of Neve-like amplification for under £1,000. A bargain. Home studio operators could benefit from the expansive, vintage nature of the Junior as an alternative to the clinical sound produced by most quality modern interfaces.

9/10

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Choice 9/10 MusicTech

SONOKINETIC

Percussão Do Brasil

Percussão Do Brasil contains all the main instruments of a typical Brazilian percussion ensemble and is capable of producing a true carnival atmosphere. **Keith Gemmell** gives it the thumbs up

Details

Price **€60**
Contact **via website**
Web **www.sonokinetic.net**
Minimum System Requirements
NI Kontakt 5.1 and up.

Key Features

- 16 samba band instruments
- Multiple round robin and velocity samples
- Individual selectable round robin
- Two-handed keyboard layout
- 'Ensemblator' - variable ensemble sizes
- Convolution reverb

Anybody who has ever owned a General MIDI keyboard or a Roland Sound Canvas (remember those) will be familiar with the sounds of such exotic percussion instruments as the claves, surdo, agogo bell, cowbell, shaker, güiro, whistle and more. They were all crammed into the limited GM specification, along with just about every other instrument known to man. Quite a feat really. Of course, in most cases just a single drum hit was available and emulating fiery latin percussion ensembles wasn't feasible.

These days, it's a different story and 50 Euros will buy a fully sampled bateria with lots of round robins and velocities, such as Sonokinetic's Percussão Do Brasil. Recorded with the assistance of a South American music expert, it features 16 Brazilian percussion instruments in 24-bit format and more than 2,200 samples. A full version of Kontakt 5.1.0 is required. Note, it's not compatible with the free Kontakt Player.

Brazilian flare

Open up the single Kontakt patch provided and we are greeted with a very colourful interface, the perimeter of which sports jungle-like fauna, a bright yellow parrot and a toucan. It's all very jolly and creates just the right atmosphere and a sense of anticipation for what's to come. All the controls are displayed on a single page. Centre-stage are the 16 percussion instruments, each enclosed in its own box, along with a graphic display. Clicking on these turns them on, causing them to appear in the familiar Kontakt keyboard below. Small, high-percussion instruments are coloured blue, mid-size yellow and large bass instruments red.

All the articulations for a particular instrument are loaded onto consecutive keys, which is nice and handy playing-wise. However, the various articulations are not named which, if you are unfamiliar with the instrument and its playing techniques, is slightly confusing particularly when two or more instruments of the same type - mid-size yellow, for example - are loaded together. For playing one instrument at a time, though, an instrument can be replicated for two-handed playing – an excellent feature for playing fast passages and rolls.

Each articulation also includes a number of round robin samples that cycle through on playback, and because each one is designated a key, these can be turned on or off at will.

Two microphone positions, close and far, are available for each individual instrument, along with volume and pan controls. All the settings here are remembered, even when the keyboard mapping is altered.

Also available for individual instruments is a three-band EQ with hi, low and mid controls. A default convolution reverb, chosen for its suitability as a percussion environment, is loaded whenever an instance of Percussão Do Brasil is opened. Wetness and size controls are available in the main GUI but can be further adjusted in Kontakt. Impulses can be changed here, too.

Alternatives

Samba Drums from Wavesfactory (€19.95) is based on a Brazilian percussion ensemble and features 10 instruments, each with four velocity layers and six round robins. Carnival Drums: The Spirit Of Brazil from Zero-G (£76) features the main drums of the Brazilian samba baterias. In essence a loop library, with 14,000 of them, multi-layered hits of all the drums are available.

Carnival time

A real live Brazilian 'bateria' typically contains several players for each instrument and to achieve the same effect, Percussão Do Brasil provides an 'Ensemblator'. Turn it on and multiple hits can be played, and the timing of the hits can be tightened or loosened with a Spread dial. It works brilliantly and provides a quick way to drum up a full-bodied carnival frenzy. Each instrument can be adjusted independently, providing a good deal of control over the size of the full ensemble. Like the EQ controls, any settings made are remembered.

There are some wonderful-sounding instruments here, but there is no mention of them in the manual. Some information on their construction and typical playing techniques would be useful for the uninitiated. That being said, some glorious and exciting effects can be produced easily without having any in-depth knowledge of samba band performance techniques. In fact, they are great fun to play and a quick way to add some excitement and a steamy Brazilian atmosphere to various kinds of productions. **MT**

MT Verdict

+ Colourful GUI
+ Exciting ensembles creation
+ Simple and effective controls

- No instrument info
- No articulation list

If you need to produce the authentic sounds of a fiery Brazilian percussion ensemble, look no further than Percussão Do Brasil – fun to play and good value for money.

9/10

"If you'd rather spend time working on your tracks instead of browsing through technical manuals, Mixcraft Pro Studio 7 is the perfect blend of simplicity and sophistication."

– *BedroomProducersBlog.com*



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Choice 9/10 MusicTech

Details

Price £399
Ecolution Remote: £59.99
Contact
John Hornby Skews
Tel 01132 865 381
Web
www.pigtronix.com

Key Features

- 10ms–10secs delay time
- True stereo i/o
- 24-bit delay line
- 15 multi-tap patterns
- Independent pitch shifting of each delay tap
- Tap tempo or manual control
- 8 modulation waveforms
- 8 filter modes
- LFO sync to tap and MIDI
- Bit crusher destruction
- Reverse delay
- Ducking
- Expression pedal control of all parameters
- Envelope control of all parameters
- Ping Pong
- Octave jump delay
- Halo 'Shimmer' effect
- Freeze effect
- Delay line bypass
- Dry kill
- Trails/listen
- Remote preset selection
- Complete MIDI control
- MIDI out
- 60 presets
- USB connectivity
- Free PC/MAC editor
- 18V DC power supply included

PIGTRONIX

Deluxe Ecolution2

This highly-advanced delay pedal offers boundless functionality and 60 presets. **Marcus Leadley** explores a unit which could add time and space to your studio…

If you're in the market for a top-end delay pedal, the Pigtronix Ecolution2 Deluxe needs to be on your options list. This stereo pedal allows you to extensively manipulate and modulate echos. With six knobs, eight buttons, two footswitches, six banks of multi-segment LEDs and a preset indicator, you can manipulate every parameter from the top of the box.

At first glance, the Ecolution2 Deluxe is a bit daunting. However, the controls are very well thought out. The unit's 60 presets can all be edited and stored and the factory defaults (which can be restored by holding down both footswitches when you power up) are extremely useful as starting points for creating your own patches and for demonstrating the pedal's potential. Each bank of 10 presets is sensibly themed: core sounds, signature sounds, classic delays, modulation effects, special effects and multi-tap rhythms. Every function can be controlled via MIDI, and a USB port is provided so you can interface with the free Mac/PC editor software, update firmware and download new artist presets.

As cataloguing every feature of the Echolution2 would take several pages, here are the highlights. The Repeats knob takes you smoothly from single repeats all the way to wild oscillations. The Mix knob sets the volume of the echo in relation to your played part. The Depth knob sets the intensity of the modulation. The Time knob changes the delay time manually (10ms to 10s) and tapping the Tap Tempo footswitch overrides this – so you can easily sync to BPM or other division. There's plenty of choice when it comes to custom filters: Lowpass cuts highs to create darker tones; the Tape filter emulates the musical appeal of the vintage circuits and magnetic media and the Comb filter is designed to add motion and dimension. The Sweep filter is modulated by the LFO, and as a result, can create auto wah-style sounds. The Crush filter (bit crusher) generated a variable effect that's a lot like adding a distortion pedal into the chain. Both Sweep and Crush can be used alone or in combination with the other filters. Pushing the LFO button advances you through the different modulation waveform options – as indicated by the changing green LED. Each of the LFO modes can be further enhanced by a 'super' version of the selected waveform created by superimposing four additional phase-modulated LFOs onto the original signal. A multi-tap feature allows you to select one or any combination of two parallel echos that can be set to musical fractions of the primary delay time. Pushing the tap button advances you through the various sub divisions, so you can create dotted eighth notes, triplets, etc. And there's even a setting that utilises the so-called Golden Ratio to create a musical swing based on a spiral. Pressing and holding the Tap Temp button freezes the first tap in place and allows you to place a second tap anywhere you choose. The Ping Pong function causes the echoes to bounce from left to right on each repeat. The Reverse function is designed to

In-use tip

A great way to record organic-sounding delays that evolve over time is to tailor the basic patch using the onboard controls, record the part dry to your DAW and then automate the preset via MIDI when the unit's set up as a hardware external. This allows you to massage parameters in a repeatable and creative way. Having control of Mix, Depth and Rate controls means that the delay profile can evolve over the entire duration of a track.

generate backwards echoes. The Halo effect causes your echoes to cascade up in octaves on each repeat. This creates the impression that you're a super-fast guitar picker with serious jazz fusion credentials! Envelope can be mapped to any parameter – so you can map it to delay time to create a flanger effect. The jump function is something you'll need the remote footswitch to access. When engaged, this causes the delay to jump up by octaves each time you tap the switch. Similarly, the remote gives you access to the Freeze function. This makes a loop out of the audio in the delay line and can be further altered and unfrozen at any time.

In use

There are several ways to change presets: an onboard preset knob that you turn and then press, or you can engage preset select mode by holding down on the tap tempo switch. When you arrive at the preset you want you just hit the Engage button. The Ecolution Remote can also be used to toggle between the first four presets in any bank. One thing that is slightly confusing is the fact that the preset indicator goes only from 1-9, while the LFO indicator is a dual-function display that also clocks from the left, indicating the bank selection (the Ecolution2 Ultra Pro, which is yet to reach these shores, adds a dual-segment display and a looper function). While all the online videos demo the unit with electric guitar, having stereo input/output means it's suitable for a wide range of studio applications. The extensive MIDI implementation further enhances its studio credentials.

The unit sounds great (24-bit, variable clock delay line coded to 'behave like a futuristic tape machine') and there are so many ways to mess with your repeats the hardest thing is to know when to stop tweaking and finally play the part. **MT**

Alternatives

The Eventide TimeFactor (£329) features two independent three-second delays and 10 stereo or dual mono delay effects in a stompbox format with mono and stereo 1/4" jack I/O. The Vox DelayLab (£227) offers 30 different types of delay and majors on retro-flavoured tones. It also functions as a looper pedal. The Strymon TimeLine (£379) is a monstrous delay with 12 delay engines, 200 programmable presets and front panel controls for Time, Repeats, Mix, Filter, Grit, Mod Speed and Mod Depth.

MT Verdict

+ Great-sounding delay unit
+ Fully programmable
+ MIDI control for all functions

- A simpler or mono delay solution might meet your needs
- Plug-ins can do the job too

The Ecolution2 Deluxe is one of the best-sounding and most flexible delay pedals on the market today. However, it's not the only Ecolution option: if you want to save around £70, there's a standard Ecolution2 with fewer onboard controls – however, you can still access all the parameters via the free PC/Mac editor. Stereo connectivity makes either of these pedals a great studio tool and MIDI implementation expands the potential for both live and recording applications.

9/10





IK MULTIMEDIA

AmpliTube 4

There's never been a better time to be a computer-based guitarist. **Hollin Jones** rocks out with AmpliTube 4…

Details

Price **€149.99**
Distributor **IK Multimedia**
Contact **Via website**
Web **www.ikmultimedia.com**

Key Features

- Standalone or plug-in
- 3D Cab Room
- Dual mics
- Swap out any gear
- Acoustic simulator
- Multiple effects racks
- 8-track recorder
- 4-track looper
- Ultratuner
- Expandable via Custom Shop

AmpliTube was one of the first guitar and bass modeling suites on the market and the fact that it's only just got to version 4 shows that each version has a good shelf life. If anything, guitarists are more likely now than at any point in the past to use software processing for both studio and live work. Computers are more powerful and software is more stable than ever, and iOS devices are catching up. There's a mobile version of AmpliTube as well, with many of the desktop features available as add-ons.

AmpliTube for Mac and PC works as a standalone app or as a plug-in and comes with a lot of new stuff compared to version 3. As well as a cosmetic overhaul there are a lot of new features and gear models. First up is the Cab Room, a way to control the virtual generation and recording of your sound. This gives you a nice 'room' in which your speaker appears together with one or two microphones that can be moved around and repositioned just like you would do in a real studio. The difference with software is that you can keep swapping gear as much as you like.

The Cab Room has five main sections. You can choose a speaker cabinet and select individual speakers to go inside it. Mics can be selected and placed in the room and you can change the room itself to one of a number of available spaces. Last but not least, there's a mixer section where you can mix and blend the different signals such as mics, ambience, DI signal and main mix. This is all very nicely designed and easy to use, and tailoring just the kind of sound you want is not difficult.

Classic kit

You get a good selection of gear thrown in as well. For a start, there are five new amp models recreating some classic British amplifiers from Marshall. There are four more amps, 10 stompboxes, 10 cabinets, 29 speaker models, three mics, two rack effects units and two tuners. As you would expect, these can be combined in any way you like, you're not restricted by having to use matching components. AmpliTube also comes with the Custom Shop application, IK's online store from where you can audition and buy all kinds of other content such as amps and stompboxes. This way, you can add just the gear you want, and many items are available in bundles at a discount. AmpliTube is essentially the container for the gear.

The presets are really good, with tons of power and character available and you can tweak setups easily by navigating the different sections. There are two pedalboard slots then two amp stages, two insert effects slots and then the cabinet stage. Finally, two more effects racks are available, and setups can work in series or parallel. The gear in each section has its own controls that you can edit easily with the mouse, and effects, amps and cabs have presets, so creating customised processing chains is easy. MIDI learn is widely supported, too, so setting up foot control of effects is straightforward. IK makes hardware such as Blueboard to enable this kind of thing. For live performance, you might want to assign MIDI controls to the preset slots so you're able to remotely change presets.

Lay it down

Also new in version 4 is an acoustic simulator pedal that can take an electric signal and turn it into acoustic sound, with different body types. The stompboxes and rack effects are also more or less interchangeable, so you can use them across any effect slot. When running in standalone mode, you now get an eight-track recorder with essential controls and effects, as well as the ability to import audio files, set loop points and even change pitch or speed independently of one another to help you practise tricky riffs. Finally, there's a MIDI-controllable four-track looper with a futuristic interface. This lets you record your own loops as backing tracks and build up parts without leaving AmpliTube.

AmpliTube 4 is slicker and more powerful than its predecessor and delivers excellent guitar and bass tone with a flexible interface. A few presets contain 'locked' modules that you have to buy, but the majority of bundled presets don't. The virtual cab room works really well in letting you tailor your sound and the many amp, effects and cab controls can be tweaked and most linked to MIDI controls for live performance. Factor in extras such as the online preset exchange and there's much for guitarists to like. **MT**

MT Verdict

+ Great guitar and bass tone
+ New look is slick and friendly
+ Cab Room works really well
+ Good selection of bundled gear
+ Ability to record and mix onboard if you want to
+ Can use effects in any slot
+ Multiple room simulations
+ Tools for practising

- Some presets have components that need to be unlocked
- Competition from products such as BIAS FX is strong

A worthy update to AmpliTube with some great new features and excellent sound.

8/10

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Choice 9/10 MusicTech

RME Babyface Pro

The latest compact interface from RME packs more than you'd think into one sturdy box. **Andy Jones** tests the Babyface Pro and tries to avoid the 'cute' jokes…

Details

Price **£579**
Distributor **Synthax**
Contact
01727 821870
info@synthax.co.uk
Web
www.synthax.co.uk
www.rme-audio.de

Key Features

- 24-channel, 192kHz interface
- USB 2 bus powered
- Two digitally controlled preamps
- 12x i/p, 12x o/p
- 1x ADAT I/O or 1x SPDIF I/O optical
- 4x analogue i/o
- 1x MIDI i/o
- Separate outs for hi and low impedance h/ps
- XLR outs and headphone outs
- TotalMix FX software included

The compact interface market is a crowded one thanks to an ever increasing number of singer-songwriters, bloggers and internet 'experts' wanting to spread their opinions and knowledge on everything from video games to DIY. In short, everyone from Ed Sheeran to your local vlogger needs a compact interface to record either a million-selling album, a *Fallout 4* tips video or anything in between. And, yes, I did just use the word 'vlogger'. How cool am I?

RME has been doing interfaces for the best part of two decades, so it knows this market well and has a range of models covering everything including PCI, MADI, FireWire and USB. The Babyface Pro, however, is out and out aimed at the mobile community. It can be used with or without a computer and iPad connectivity extends its practical use even further. On paper, then, you can take it anywhere and do a lot with it while you're there.

What you get

So, the Babyface Pro *is* compact, not exactly light in weight, but it does feel sturdy and capable and able to withstand the rigours of mobile recording, especially with a decent carry case that can withstand just about any knocks. This case is quite large, however, and you wonder if RME couldn't have reduced its size to make it more mobile-friendly, especially as the alternative carry pouch is a bit feeble. The unit itself features RME's newly designed XLR sockets, which are standard sockets but use space-saving housing, so all four ins and outs sit snugly at the back of the unit. This makes for a decent desktop experience with the Babyface Pro sitting practically next to a desktop or laptop computer.

You get two XLR ins and outs, two further line inputs (3 and 4) and two headphone outs, both TRS and mini jack for low and hi-impedance 'phones. Connections are completed by TOSLINK i/o (for ADAT or SPDIF) and a MIDI breakout socket.

Onboard meters show input and output levels very clearly and concisely and switches beneath allow you to select In, Out and Mix. These switch the dial to control input and output levels, and Mix mode allows you to control input mixes to each output so you can control monitor feeds. The Mix button (B) can also, alongside the Set button (A), be used as a definable hot key.

Ins and outs

The Babyface Pro installed easily as an available interface on my test Mac with Logic – it was just a matter of downloading the driver and TotalMix FX software (also available on DVD), installing and then selecting it from the audio preferences options.

TotalMix FX is the routing software that comes with the unit – a familiar interface if you've used just about any modern interface. It simply sits as a layer of routing on top of your DAW and it opens automatically when you open your DAW (or it did with Logic). It's not as sleek as some other control software – I recently tested the latest Focusrite Control software, which has bigger tabs and controls. TotalMix FX on the other hand is quite old-school and mimics a hardware mixer more – and consequently looks quite complex, although you can expand sections. And what it lacks in use, it makes up for in functionality, as you can route pretty much anything to anything else.

You get three sections: Hardware Inputs (ADAT, analogue, instrument); Software Routing and Hardware Outputs. It can be a little fiddly in operation, but fortunately a Zoom feature allows you to toggle between four settings so old duffers like me can see, click and route with relative ease. However, on the largest setting I did lose the bottom of the screen on my MacBook, and using obvious touchpad swipes could't retrieve it, so I had to revert to 100% – a minor inconvenience.

On the plus side, you can also choose Mix Snapshots, Group Settings and Layout Presets from menus on the right. Channels can also be resized to keep those in use more prominent – always useful.

Another big bonus is the onboard effects, something that you don't always get with software like this. Here, you get EQ, reverb and echo, plus a bunch of presets, all selectable from another hideable tab. Indeed, the whole software experience has a modular feel so might seem fiddly at first but you can very much spec it how you want it to be. However you use it, TotalMix FX is one of the better software interface 'layers' in terms of functionality.

Sound-wise, there's nothing to fault the interface. It's crystal clear and low in noise – I was testing it with mics and analogue synths – although the rotary



at the front was not always set automatically to logically control levels (easily sorted in the software).

The Babyface Pro can also be used as an iPad interface when in CC (Class Compliant) mode. Download the TotalMix FX app and you can use the unit in many recording situations – probably more than you'd consider with your computer, as the iPad is that much more portable. And in some ways, this is where the unit really does excel, with the modular approach of the software really coming into its own.

You should also consider using the Babyface Pro as a standalone mixer, as it is more than capable of acting as one minus a computer or iPad, although you will need to consider external power (supplied) so it's less mobile in that scenario. But as a quick-fix mixer it adds another string to its bow.

Conclusion

The Babyface Pro is a fine unit. It's not the cheapest interface around, but it can be used with a computer, iPad or standalone. It also screams quality in terms of components, flexibility, sound, routing and physicality. You just feel you can trust it to go pretty much anywhere with you. It also ticks the right boxes in a world where we've gone looks mad, but its design is also thankfully about being practical, so while it looks and sounds the part, it's also aimed at the real world. Everything from cabling to the casing is thought through and you get the impression there are musicians and producers behind the design. So top marks to RME for providing a rugged, top-spec interface and mixing solution – with or without a computer – for bigger pockets, and a great interface for iPad users, too. **MT**

MT Verdict

+ Great portable unit that can run standalone or with iPad/computer
+ Compact design
+ Great i/o specs
+ 'Stabicon' connectors mean more robust cables and less mess
+ Great sound quality and low noise as you'd expect with the specs
+ Robust unit with a tough aluminium casing
+ USB-powered
+ TotalMix FX has great functionality and routing options
+ Lots of flexibility and control via front-panel buttons and dial
+ Smaller XLR connection cases mean it's neat on your desktop

- Software has one or two niggles and is a little old-school
- Cases are either too big or too flimsy, depending on which one!

Robust, compact, easy to install, sounds great and loads of routing options. A great mobile interface!

9/10



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AUDIOTHING
Vinylstrip

Value €£$ MusicTech

Choice 9/10 MusicTech

It seems like vinyl has never gone out of fashion, but Audiothing might have a short cut to getting that sound. **Hollin Jones** spins up Vinylstrip.

Details

Price **€55**
Distributor **Audiothing**
Contact **Via website**
Web **www.audiothing.net**
System requirements
PC
Windows XP SP2 or later; Intel Core 2 Duo 2GHz / AMD Athlon 64 or equivalent
2 GB RAM
VST2 and AAX 32-bit or 64-bit host
MAC
OSX 10.6.8 or later
Core Duo 2GHz
2GB RAM
VST2, AU and AAX 32-bit or 64-bit host

Key Features

- Multi-stage processing
- Distortion, compression and bitcrusher
- EQ, reverb and Vinylizer
- Randomization with section locking
- Drag and drop of modules
- Designed to be light on CPU
- Can silence dust and noise when no input signal is present

It's ironic that one of the side-effects of recent decades of technological progress in audio recording has been that some people have started to find digitally recorded sound too clean. There's a never-ending debate still raging somewhere on the internet about whether or not vinyl sounds better than CD. And whatever your view, nobody can deny that they sound different to each other. It might be argued that if you want the sound of vinyl you should press to vinyl, but that's not a particularly accessible route for most people to go down. And sampling from old records is, if we're honest, a bit passé these days.

As you might expect, plug-ins come to the rescue here, letting you apply specific amounts of vinyl effect to just the parts of a track you want. It's not a new idea: Steinberg's Grungelizer was doing it over a decade ago, and Reason has the Retro Transformer. There is still a market for the vinyl effect and the key is in getting the subtleties right. More controls mean more say over the shaping of the sound. Vinylstrip is a multi-format plug-in from Irish developer Audiothing and gathers together multiple different tools.

In the groove

You get six modules in the retro-themed interface, and these can be dragged and dropped to alter their order, which in turn can affect the way the sound is processed. There are 15 presets supplied and also a Randomizer button that dials in all-new settings and switches different modules on or off, though it doesn't rearrange their order. You can, however, lock or unlock the different sections to determine if they are included in the 'randomization'. The presets range from mastering through individual drum styles to more esoteric and extreme processing. It's been designed to be light on your CPU and it certainly seems to be: the processors at work aren't of a type that are generally hugely processor-intensive.

Each of the sections can be turned on or off and the master channel has a gain and dry/wet control for altering the overall levels and mix of effects. In no particular order, the first module is a compressor with an amount control and fast/slow envelope knob. Mixing and mastering for vinyl is different than working to digital, and you can emulate the differing styles of compression involved using this section. Next is reverb, with Amount, Size and Colour knobs to add some space to the signal. This can be helpful for adding a slight sense of space to the sound, which is sometimes associated with vinyl.

Distortion is next, with Drive and Harmonics dials to add some dirt and colour to the signal. This saturation or slightly warm distortion is one of the characteristics that some people feel makes vinyl sound more pleasing than digital. Applied gently, it works wonders, though it's also possible to drive it pretty hard if you like. Then there's an EQ section with Tilt and Cutoff dials to accentuate the highs or lows and change the centre frequency.

The Vinyl section comes next, and here you get various different controls to artificially add imperfections to the signal. Dust Amount and Rate add virtual dirt to the surface of the record to add gentle crackling. Noise and Wow simulate mechanical fluctuations in the speed of the spinning disc, and Record Age does a few things that make the sound 'newer' or 'older' in a generic kind of way. The Stereo knob can make a sound more stereo or mono as you turn it. The last section is called Sampler, and this simulates the effect of old-school sampler processing on your signal. The Bits control can be used to crush a signal and add digital distortion, and the Rate control reduces the sample rate frequency, which causes aliasing. The Sampler section isn't, strictly speaking, the same as the vinyl sections, since it recreates an entirely different kind of degradation: digital rather than analogue. It might not be an authentic part of 'vinylizing' a sound, but it recreates the behaviour of early samplers and as such is a nice bonus.

Vinylstrip is a great plug-in that can lend a retro feel to anything. Ageing entire songs is one thing, and perhaps something you'd do for audio post production for film. For musicians, you're more likely to need to put some dirt and crackle on a drum part while leaving the other tracks clean. Subtlety is the name of the game, and Vinylstrip lets you add anything from the merest hint of age and imperfection through to full-on dirt and grime. A downloadable demo is available, too. MT

MT Verdict

+ Excellent for warming up tracks
+ Very easy to use
+ Randomizer is a nice touch
+ Authentic vinyl sound
+ Can be used on separate tracks or whole mixes
+ Sensibly priced

- A few more presets would be nice

An approachable but powerful way to add all kinds of vinyl, ageing and retro effects to your tracks with a minimum of fuss.

9/10



Details

Manufacturer **Gibson Pro Audio**
Price **£629.99 each**
Contact **Focusrite UK 01494 462246**
Web **www.gibson.com**

GIBSON PRO AUDIO LP6

Key Features

- Type: Active Monitor, bi-amped
- Tweeter: 1" Diamond-like, carbon-coated titanium
- Woofer: 6" non-woven, carbon
- Frequency Range (-10dB): 37-47kHz
- Crossover Frequency. (Acoustic): 2.7kHz
- Max Peak SPL (Limiter Engaged) per pair: 117 dB
- System Power (Hi+Lo Amp combined): 247 watts
- Amplifier Distortion: <0.2%THD+N 20Hz - 20kHz (-3dB Max Power)
- SNR (Signal to Noise Ratio): >92dB
- Bass Level Adjust Switch: -4dB, -2dB, -1dB, 0, +1dB, +2dB, +4dB
- Treble Level Adjust Switch: -4dB, -2dB, -1dB, 0, +1dB, +2dB, +4dB
- Input Connectors: RCA, Balanced TRS, Balanced XLR
- Dimensions: 356 x 230 x 300mm
- Weight: 8.2Kg

Although Gibson now owns KRK, the Les Paul monitor series has been designed as an entirely separate product. **Huw Price** tests the LP6s…

Les Paul's name has become so synonymous with a certain model of electric guitar that the very idea of a reference monitor carrying his 'John Hancock' may seem a bit odd. After all, he did actually contribute to the design process of his eponymous Gibson guitar, but having died in 2009 at the ripe old age of 94, it's probably safe to assume that old Lester never beta-tested the LP6.

Even so, Gibson's new range of Les Paul monitors could be viewed as a fitting tribute to the man himself. Les inspired one of the most iconic electric guitars and was a superstar in his own right, but his cred as a studio innovator and inventor are also second to none. After all, the man is widely credited as the originator of multi-track recording as we know it today.

On the 'burst

Gibson's concerted effort to carry the Les Paul guitar vibe over into the realm of studio monitors is far from subtle. Most striking is the range of finishes available on the LP6's front baffle. These include Tobacco Sunburst, Cherry Sunburst and Cherry. And, yes, the finish is nitrocellulose…

Contoured to resemble the iconic top carve of the iconic guitar itself, the baffle is described as "carved flame maple". The review set had a 1960-style Cherry Sunburst finish but the 'flame' wasn't much in evidence, and it's actually a veneer rather than solid maple which, from a resonance standpoint, is actually preferable.

The other guitar-themed features include cream plastic binding around the front ports, baffle and the tweeter waveguide; shiny chrome for the woofer surround and tweeter plug; and a facsimile of Les Paul's iconic signature on the non-woven carbon cone of the 6" woofer. A back-lit Gibson logo indicates the speaker's power status.

Speaker specifics

Tech-wise, the speaker's features are fairly basic. The inputs are balanced TRS jack and XLR or unbalanced RCA. In addition to the power switch there one for standby mode, which engages 30 minutes after no audio signal is detected. Three knobs provide control over volume, bass and treble. We couldn't find any reference to the frequency points in Gibson's product literature but the tone controls are indented for easy matching.

The obvious concern might be whether the effort that's gone into the design has taken precedence over the sonics. It seems not because the LP6 sounds like a perfectly credible and useable studio monitor. The background noise is low, 247 watts is more than adequate for medium-sized control rooms and the overall sound shows no sign of being obviously hyped at any frequency point.

That said, we did find that the sound was a bit 'top and bottom', rather than 'flat' across the midrange. That translates to airy trebles and good solid bass, but we sensed there was some lack of detail and definition in the mids when A/B switching between other monitors. Some source material sounded slightly edgy too, although that impression may diminish after the LP6's are run in.

The stereo imaging is fairly good, too, but maybe not quite as pinpoint as some of the LP6's competitors at the same price point. With dense mixes, elements can take on a slightly blurred quality, which makes them harder to pin down in the left/right picture.

The bass extension is impressive and the LP6 doesn't 'port chuff' at all. However, the bass response isn't particularly speedy or precise when things get really dubby and deep.

Style over sonics

Ultimately, the LP6 operates and sounds like a perfectly decent mid-priced studio monitor but costs a lot more. Unless you're a massive fan of Les Paul guitars, the looks mightn't be enough to win you over, and they may even limit the LP6's appeal. Nevertheless, we can certainly picture the LP6 sitting on a rock producer's meter bridge, where the up-front and exuberant sound would complement their looks. **MT**

Alternatives

We can't gloss over the fact that the Gibson LP6 is going head-to-head with some very serious competition, from well-respected and long-established monitor manufacturers. That competition includes the ADAM A77X (£644), Genelec 8040 BPM (£629), EVE Audio SC305, Mackie HR824 Mk2 (£576) and the Focal CMS65 (£538).

MT Verdict

+ Very distinctive looks
+ Rock'n'roll vibe
+ Auto standby mode
+ Ample power

- Sound quality isn't 'best in class'
- Imaging can be vague
- Midrange slightly lacking detail

Although the LP6 is a useable monitor, its looks are perhaps more attractive than its features and sound quality.

7/10



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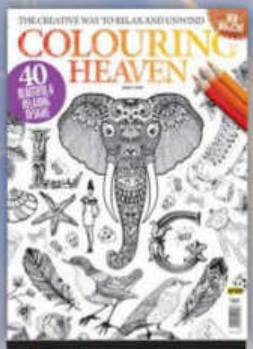
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Contact **+44(0)161 327 2419**
Web **www.editorskeys.com**



We do love the Editors Keys low-cost USB mics and those back-lit keyboards. These are the first 'phones we've had in for testing. At £35, they are almost alarmingly cheap, and with Bluetooth capability they're well spec'd too. The suprises don't end there, as they are reasonably sturdy and comfortable – snug rather than transparent but quite light. Setting up is stupidly easy, too, as it always seems to be with Bluetooth: search for device, device is 'seen', connection made, reassuring sound effect tells you all is fine. They fall down on sound quality – the bass is OK, but they sound boxy and enclosed. OK for mobile music and a range of mix trialling but not critical mixing. MT

Key Features
- Bluetooth functionality
- 10 hours' playback per charge
- Hands-free incoming call manager
- Frequency range: 20Hz-20kHz
- Line in
- Charging cable

MT Verdict

Features versus price is great but the sound, while also OK for the cash, is not going to win any awards.

6/10

Snowball ICE USB

Manufacturer **Blue Microphones**
Price **£49.99**
Contact **via website**
Web **www.bluemic.com**



Blue Microphones are highly distinctive, and also available in a range of colours (including, thankfully, blue). The new Snowball Black ICE USB is a large round condenser, with a single cardiod pattern. It's a bit bigger than a baseball (US readers) and about as heavy as a cricket ball (UK readers). Plug n play was very easy in Logic – it just required a quick unplug and replug – and the sound quality was pretty good. While it's designed as a jack of all trades, we found that vocals were clear and concise. Years back, Blue was quite the fancy name in microphones, so it's great to see it at this price and spec. That bright red light on the top is a tad annoying, though. MT

Key Features
- USB condenser mic
- Cardioid pattern
- Weight: 816g
- Comes with tripod stand and USB cable

MT Verdict

Large and distinctive desktop USB mic that brings Blue quality to podcasts YouTubers and a range of quality instrument recording tasks.

8/10

Riva Turbo X

Manufacturer **Riva**
Price **£299.99**
Contact **via website**
Web **http://rivaaudio.co.uk**



We're a little too impressed with Bluetooth, we admit it. It still gives us a thrill when one wireless device pairs with another so easily and when doing something on one affects another. Either we're too easily impressed or of a certain age where we remember when things didn't work so well, even when connected with wires!

The Bluetooth speaker market has boomed in recent years and is a great way to take your studio out on the road. OK, you're not likely to get critical monitoring and mastering this way, but for doodling on ideas in your hotel room Bluetooth is the way to go.

Riva's Turbo X is a 'highly anticipated release' in that it is attempting to bring super-high audio quality to the market, and at £299 – the price of a very-low-end-but-still-just-about-good-enough set of studio monitors – it damn well should be.

In what we could call shampoo-a-like terminology, it boasts Trillium Technology, which apparently helps deliver its good sound as well as surround sound for gaming. The specs include three 60mm drivers, delivering 45 watts RMS power, and there's an impressive 26+ hours' battery life.

The speaker itself feels weighty and well constructed and certainly a cut above the many other speakers on the market. It is stupidly easy to set up and the controls offer volume, S for surround and T for Turbo. The former widens things up, while Turbo plays an engine revving sound before boosting the volume (you might like this but it does wear after a while).

You might find that for composing latency is an issue, but then again that is true with Blutooth speakers. The sound is also a cut above though. It delivers a far greater bass response than it should do for the size – perhaps a little too coloured for accurate monitoring – but a great sound for both composing and partying. We found placing the speaker at head height resulted in the best response – any lower and the bass was too enhanced (we'd have loved an EQ control either way). Interestingly, Riva recommends placing the unit in a corner for best results, but we found near any wall was also good.

As great as the Pro X sounds – and it is among the best Bluetooth speakers out there in this respect – the price does put it in a tough spot where 'proper' speakers are within reach. Shop around and you should get it cheaper, which therefore (obviously) makes it a better buy. MT

Key Features
- 45 watts RMS power
- Seven custom transducers
- Uses proprietary Trillium™ technology
- 26+ hours' battery life
- Dimensions (lxwxh mm): 230 x89 x105
- Weight: 1.4kg
- Surround sound mode

MT Verdict

Too expensive, yes. Otherwise one of the best sounding and spec'd Bluetooth speakers on the market.

7/10

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MT Feature 6 mics

6 MICS TO LUST AFTER

Good instruments and a talented vocalist can only take your recordings so far if you're using second-rate microphones. **Rob Boffard** rounds up a selection of the best mics to buy if cash isn't an issue...

Your mic isn't good enough. It just isn't. Sorry, chum, but that cool little condenser you've got knocking about? That cute mic locker setup? Not gonna cut it. What you really should do, if you want to be the ultimate uber-producer, is remortgage your house (or sell a kidney) and buy one of these six monsters. Sure, it'll set you back thousands of pounds, but can you put a price on quality? Just do it! After all, these mics may be worth a staggering amount of money, but there's a very good reason for that: they capture sound staggeringly well, too.

Telefunken's **M7 capsule** behind that **distinctive grille** gives you sound that is **just breathtaking**

01 Telefunken U47

This is the mic that says you're serious. It tells anyone who comes into your studio that you are ready to work, that your sessions are run with ruthless efficiency, and that you probably do things such as build your own synths and obsess over the right amount of dither. In use, though, this mic is



02

just magnificent. It's a genuine classic, a piece of German engineering that has earned its spot in the pantheon of great mics. Its clarity is what really sells it – Telefunken's M7 capsule behind that distinctive grille gives you sound that is just breathtaking, and it's surprisingly versatile for an expensive condenser. Got six and a half grand? Congratulations – it's yours.

02 AKG C-12 VR

AKG calls this the Holy Grail of microphones. Dismiss it as marketing nonsense all you want, but you'll almost certainly be treating this like a sacred religious object if one ever falls into your hands. Its distinctive shape and its great looks (if you buy it, go for racing green) make it a winner purely from an aesthetic standpoint, but from an acoustic one it's mind-boggling. The sound is just wonderful: wide, rich, warm and distinctive. It has a multi-pattern selector and a huge frequency range, so it'll slot nicely into any studio setup – assuming you've got £4,000 to spare.



03

03 Brauner VM1S

This is a cult favourite. We've excluded matched pairs from this line-up, but this one sneaks under the radar. It's a stereo unit that actually combines two of Brauner's VM1 mics, each with its own independent power supply. When it's used right – say, in recording a choir – the level of detail in the recording requires adjectives that don't exist in the English language. The sound of this mic is actually quite different to more old-school mics such as the Telefunken or the Neumann; it's cleaner, somehow, exchanging distinctive character for beautifully crisp recordings. Not everyone's choice, but it's still lust-worthy. The price? That'll be £7,500.

04 Neumann Solution D-01

Ooooh. Thought we'd forgotten about Neumann, didn't you? Not a chance. The company is one of the greatest microphone manufacturers on the planet, and the Solution D-01 is at the apex of its considerable product line. Really, we could spend a long time and a lot of money digging into Neumann's historical archive of mics, but the D-01 is our pick for the top



04



05

of the pile. Yes, the sound is just epic. Yes, it comes with 15 different directional settings, which you can operate remotely. Yes, it has a dynamic range of 130dB. Yes, it has its own

When the **Brauner VM1S** is used right the **level of detail** requires **adjectives that don't exist**

interface and dedicated software. And yes, it will cost you more than your first-born's university fees. How's £9,000 grab you?



06

05 DPA 4022

Not the biggest or most well-known name on this illustrious list, but still a heavy hitter. And the company's 4022 model is just unbelievable. It's used primarily for recording classical music – if you've heard a big orchestral recording, with that distinctive big sound, there's a very good chance a 4022 played a part in it. The mic is known for handling very high sound pressure levels, making it a favourite of many classical producers. It's not the prettiest of mics or the easiest to use, as it requires careful positioning to get the right results, but once you've got the hang of it, this little dude will blow your mind. It's comparatively cheap, coming in at around £1,000, but it's worth including because of its incredible sound quality.

06 Sony C800G

The C800G is a beast. It's a big, punchy, colourful microphone that's ideally suited for recording singers with big lungs. It's got a dual diaphragm, and a very high-quality tube that comes with its own in-built cooling system to achieve optimal results. That cooling system is the big brick hanging off the back of the mic, which looks odd but makes a serious difference. Despite its big-rig looks, it absolutely excels at recording delicate sounds, such as acoustic guitar or soft vocals, with a level of detail and clarity that will make you weep. Of course, you might also squeeze out a few painful tears as you swipe your card for £5,000… cooling systems don't come cheap, you know. MT

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Welcome to the ***MusicTech* Buyer's Guide**, where we round up some of the best products recently reviewed in the magazine. This month, six of the best **software titles for cinematic scoring** all coming to a moving picture house near you soon…

BEST Fantasy

Best Service Era II



Details
Price
€259
Contact
Best Service
+49 (0) 89 45228920
Web
www.bestservice.de

There are loads of instruments and libraries that could be used for film soundtracks, and almost as many that could be applied to the fantasy genre, but there is only one Eduardo Tarilonte, the man who has made his name with amazing libraries including *MusicTech* favourite Shevannia and this, Era II. Andy Jones said: "It's a thoroughly astonishing collection – a museum of instrumentation and a fantastic resource. For today's producer it's a wealth of history to tap in to and slightly left-of-centre instrumentation to make your compositions stand out from the rest. A worthy update to Era and the €99 update cost is well worth it. And those new to the Era world? On the strength of Era II, it really is time to take a visit." He concluded: ***"Era II has been put together in such a way that we can all discover some amazing new sounds and textures and apply them to many genres of music production."***

BEST Guitars

Vir2 Apollo Cinematic Guitars

Apollo Cinematic Guitars is designed specifically for sound design work. With 22GB of content from industry-leading composers and producers, it contains sounds that all originated from a guitar, but they include things such as slides, white noise and amp buzz. We said: "This is a great tool for anyone working with scores who wants to bring a new level of atmosphere to their productions. ***A very solid collection of guitars expertly tuned for use in cinematic scoring. Ethereal tones and stunning guitars that are excellent for atmospherics and soundscapes…"***



Details
Price
£280
Contact
Time & Space
01837 55200
Web
www.timespace.com

BEST Vocals

Sonokinetic Tutti Vox



Vocal collections geared for cinematic scoring are not exactly common place, but Sonokinetic's Tutti Vox has several pleasing features, including a phrase builder for constructing conventional tunes and harmonies and a section containing a selection of spoken words. Everything was recorded in the same hall as sister libraries Capriccio, Grosso, Minimal, Da Capo, Tutti and Vivace. As such, the ambient sound of Tutti Vox blends well with all of those. Reviewer Keith Gemmell said: "There's much to commend it – a new approach to choir sampling, a very realistic sound with unique and highly imaginative phrases, and all the necessary ingredients for cinematic productions."

Keith concluded: ***"One of a kind. A complete library crammed with imaginative choir effects, along with sung phrases, spoken words, effects and good editing facilities. This is a first-class library."***

Details
Price
€299
Contact
via website
Web
www.sonokinetic.net

BEST Out there

Output Sounds SIGNAL



Details
Price £159
Contact via website
Web outputsounds.com

Signal is the latest instrument from Output, makers of the unusual but rather great REV. Its focus is towards 'pulsing' sounds – whether it's a chugging synth bass, abstract glitching effects, or swirling arpeggios. Mark Cousins said: "The creative possibilities of SIGNAL get really interesting when you factor in its pulse engines. This is the key feature that brings SIGNAL's presets to life, adding various forms of movement and development within the patch. From the imaginative, carefully-curated sound sources through to the intricacies and flexibility of this engine, SIGNAL is an instrument that's designed to deliver a wealth of inspiring and intriguing sounds. ***Visually and sonically stunning , SIGNAL is a thoroughly inventive instrument packed full of distinctive sounds."***

> "Things get **really interesting** when you factor in the **pulse engines** which are a **key feature**"

BEST Up there

Heavyocity Gravity



Details
Price $449
Contact sales@heavyocity.com
Web www.heavyocity.com

Like Signal, Gravity's aims are movement, rhythm and excitement, and as such could be used to score any action flick. With a price tag of $449, it is by no means the cheapest collection out there, and with more hands-on tweaking and customising tools available than your average collection, it is more of an active instrument than a passive library. Andy Jones said: "Gravity is a superb collection, made even better by the extra control. You might have to invest more money, but put the time in and, with Gravity on your side, you could be streets ahead of – or (sorry) above – the competition. ***There are enough features here to take sounds into a new dimension. This is both inspirational and effective."***

BEST Percussion

IKM Cinematic Percussion



Details
Price €99.99
Contact Via website
Web www.ikmultimedia.com

Well, the clue is in the name. This is an add-on sample pack for IK Multimedia's Sampletank virtual instrument and has been recorded by Greg Ellis, a Hollywood percussionist, using his own impressive collection of weird and wonderful percussion instruments from around the world. You get loops that are played by the man himself, and he's playing the same instruments used on numerous scores. Hollin Jones said: "This goes beyond whatever percussion collection you may have and will serve any soundtrack composer well. ***A very solid percussion instrument collection, as heard on some mega hit movies."***

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Bert RAM in his current studio, and through the studio looking glass we also get to see him and his gear from years ago…

Show off your studio

An unusual **episode of SOYS** this issue as we run a promised interview with **Bert RAM** complete with studio time travel! Send us a picture of your studio via the ***MusicTech*** **Facebook** page and we'll get in touch…

Bert RAM

Interviewee: **Bertram Ernst**

Contact: **via www.roman-artist.com**

We originally ran a feature on Bert RAM in MT151, as we were fascinated by his studio shots from the 80s, 90s and present day – it's rare to see a set-up develop like this. They show a three-decade younger Bert within his 80s set-up – classic for the time and comprising tape, analogue and classic 80s synths from Yamaha and Roland. The much more up to date shots of Bert's studio are a sleeker and cooler affair, with Bert seemingly not having aged nearly as much as his gear. So what have the intervening years meant for Bert, how did his gear develop and, more importantly, is the studio located in the same place (it certainly could be judging on what is out of the window in each shot)? All the answers and more follow because, as promised, here is the full interview…

MT: Tell us the key components of your studio

Bert RAM: In 1989 I got my first record contract with Warner Germany. My artist name at the time was Roman (roman-artist.com). The first album was recorded in Hamburg. I used a Prophet 2002, DX7, Juno 60, D-50, a Tascam 8-track recorder, accordions, an AKG C414 and Shure SM58 mics. Not much equipment, but enough to realise my concept. I was really interested in sampling and this approach was a good development.

In 2008 I had a Neve console 5088, serial number 3 – a great sound and warm character. But I missed recall after years using different Macs, so I sold the console in 2015 and now I am an 'in the box' producer and it feels perfect. I have a Mac computer (3.5 GHz 6-Core) and Logic X as my DAW. Today, I love plug-ins but I have not forgotten to experiment with my Urei 1178, some Neve, Focusrite and API preamps and compressors and – of course – my old analogue instruments, like my Fender Rhodes, the Wurlitzer, the Minimoog or even my Crumar DS-2. More than ever, I am also interested in a perfect studio acoustic. Fritz Fey has worked out all



the acoustic elements (bass trap, etc) and my friends APKE Tontechnik have suggested new ATC monitors and mixing now feels very safe.

Looking at the shots, taken three decades apart, they could be (just) in the same building, or at least with the same garden…
I started my music career at the beginning of the 80s. Right at the start of it, my aim was to work in my own studio. Later, this vision became true. In the 80s [as in the picture below] my work place was good for demos. I changed the building in 2000, but both of them have windows. This is important for me: fresh air, daylight…

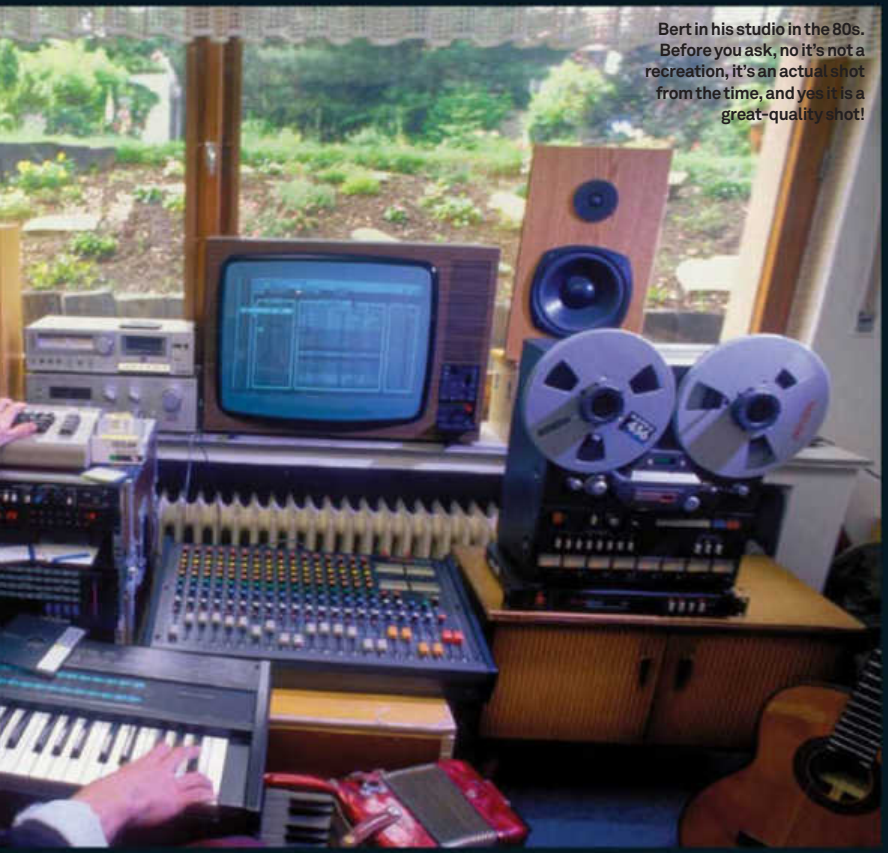
Which DAW do you use and why?
I work with Logic X (and Apogee/ Symphony). I've used it since Notator/Emagic, and I am sure that Apple always fix bugs as quick as possible. There are certain things in X that feel unnecessary (for me) and it feels like a tribute to amateur producers (the automations, the chord functions, the drummer, etc).

But, all in all, I trust Logic. The bugs concerning markers, tempo, changes, automation and cycles, etc – I can live with those as you can produce music with just Logic these days. The important thing is that you know your system and its options.

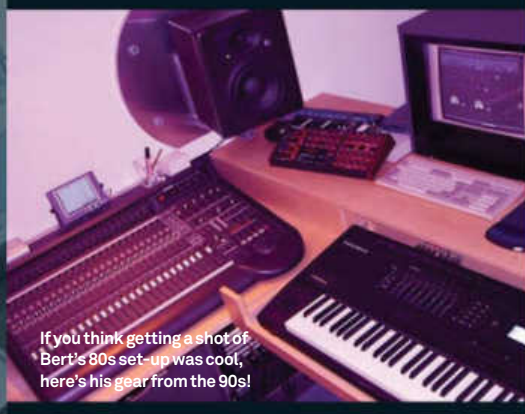
Favourite gear?
Logic, as well as my analogue gear – all their mistakes, irregularities and character. Each Moog, each Rhodes sounds different. As long as you know all these things you will be inspired by each step. I don't worry about the difference between plugins and their originals. I just use each for specific qualities. They just have to fit to my workflow.

How do you use your studio?
I produce my own music, no other bands anymore. My clients are Daimler Benz, Volkswagen, Mini, BMW and more.

Does anything annoy you about your studio set-up?
Sometimes the need to learn stuff annoys me. There are so many technical things you have to know and it takes so much time to know them properly. Sometimes bugs annoy me. Sometimes technical options annoy me, because they distract me from the real (musical) problems. High-tech is not everything. It can be just a means to express your ideas and visions. Sometimes it feels like a maze. Then I think of my old 24-track tape machine and about just making decisions (without undo). But I am aware of time pressure and compatibility so, consequently, I have chosen to mix in the box. Really, the only thing that annoys me is the moment when I am not clear about decisions. But, thinking about it more, also annoying is that it is hard to accept that – for instance – a master keyboard these days does not have the quality of old instruments from the 70s or 80s. My vintage instruments are still running!



Bert in his studio in the 80s. Before you ask, no it's not a recreation, it's an actual shot from the time, and yes it is a great-quality shot!



If you think getting a shot of Bert's 80s set-up was cool, here's his gear from the 90s!

What is your dream gear, either real or imaginary?
Maybe I'd like an old Neve console with just eight tracks, in good condition, with a specific flavour (just for recording). I also like the new Native Instruments Komplete Kontrol as now it is really easy to handle loads of sounds and parameters using it.

Do you have any advice for *MusicTech* readers?
Always do what you love and what you feel. Don't be inspired by money. Be keen on new innovations. Play with real musicians. Find out what you can and don't concentrate on your weaknesses.

Itay Kashti

Email: soho.rec.ad@gmail.com, Web: meetandjam.com/studios/478-itay-kashti,



London Logic from Itay

Key studio components?
My SSL preamps (four of them), 1176 compressors, and mainly my ability to understand what people want and turn it into music!

Which DAW?
Logic, mainly, as it's quite common in London. I'm more than happy to use Cubase, too, but I seem to be in a minority there. I can also work on Pro Tools if needed.

Favourite gear?
My 1176 compressors. They make every signal from any preamp sound perfect, if you get the right setting.

How often do you use the studio?
In the past year I've spent about 20 hours a week on sessions and work – that's excluding working in other studios which are not mine (that was about another 16-20 hours weekly), and mixing, which I tend to do at home. So it gets quite busy!

How do you use your studio? Bands or solo?
Trying to combine them both, though I use it mainly for production work with artists and bands. When I get some down time I compose music for production music libraries and publishers I work with.

Does anything annoy you about your set-up?
My current set-up doesn't allow me to keep a drum kit assembled at all times, which eats up precious studio time when bands come to record. Starting next year, this will be solved, though, as I'll be moving to a bigger studio with a great live room that will be able to accommodate bands at all sizes!

What is next on your shopping list?
Some interesting 500 series modules, because I did that silly mistake of buying the 500 series chasis and I have five more slots to fill!

Dream piece of gear?
A Neve desk because then your search for the perfect preamp is over.
I would settle for a Trident A-Range

Do you have any advice to anyone starting out on a studio build?
Not to worry about gear too much. Get a good interface, get comfortable with the DAW you're working with and try different things every day. Get a new sound, work with new genres, new people and keep on evolving.

We've teamed up with Meet&Jam Studio, a new service for studio owners to rent out their facilities across the UK and US. Sign up to the service at MeetAndJam.com and you will automatically be considered for inclusion in this, MusicTech*'s (award-winning) Show Off Your Studio!*

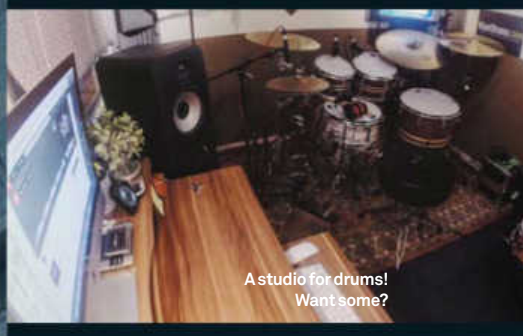
Meet&Jam Studio

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Max Saidi/ Want Drums

Email: max@wantdrums.com

Web: meetandjam.com/studios/463-wantdrums-com



A studio for drums! Want some?

Key studio components?
Focusrite preamps (Saffire Pro 40 & Ocotopre MKII); four different drum kits; 20+ cymbals; 10+ snares; Audix, Beyerdynamic and Shure mics.

Which DAW?
Logic Pro X. Simple and easy to work with. Getting polished results quickly is essential for me.

Favourite gear?
My snare drums! Changing a snare sound can drastically change the mood and tone.

How do you use your studio?
I work professionally, recording drum tracks for songwriters, bands and producers. They email me their recordings and I lay the drums on top, then I send them the full-quality drum stems!

Anything annoy you about your set-up?
Space. It can be tight when you've got people in on a session, although 99% of my clients don't come, as it's done via the internet.

Next on your shopping list?
Some vintage preamps. I'm a big fan of the vintage sound and to be able to deliver 'truly authentic' vintage drum sounds, you need the real thing!

Dream gear?
An old-school Neve desk – you can't beat that sound!

Any advice?
It's worth spending a little extra on things like mics so that you won't have to replace them further down the line. MT



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Welcome to DVD155 – It's a brand new year and we've got a 1.5GB gift of sample loops and sounds for you! There's also over two hours of tutorials on Live and Ozone 7, plus demos, software and this month's workshop files...

SAMPLE LOOPS//ROYALTY FREE & EXCLUSIVE

//CR2 SAMPLE TOOLS

Size 482MB **Format** 24-bit/44.1kHz WAV, MIDI, Massive, Spire **Web** www.cr2records.com

Sample Tools is the production arm of the highly successful electronic music label Cr2 Records, and features a range of house, techno and EDM sample packs. This month, Sample Tools has kindly put together a bumper collection of audio loops, MIDI files and synth presets taken from its Deep House 2, Heavy Electro, Melbourne Bounce, Progressive EDM and Tech House packs for you to use and abuse in your tracks. You can expect to find 186 loops of pounding bass synths, searing leads, thumping drums and epic FX, plus 29 MIDI files of basslines, chord progressions and arpeggios, and finally 12 high-quality synth presets for Massive and Spire.

SAMPLE LOOPS//ROYALTY FREE & EXCLUSIVE

//DANCE KITS & BASSLINES

Size 625MB **Format** 24-bit/44.1kHz WAV, MIDI **Web** www.equinoxsounds.com

It's time to dig out the UV paint as this month's pack from Equinox Sounds takes on psy trance and techno with a massive collection of loops and riffs. You can expect to find thumping kicks, pulsating basses, fast arpeggios, chopped up vocal hits, shimmering pads, snappy drums and loads of electronic FX. Samples are divided into three construction kits, with a full mix plus component parts, and MIDI files for the main melodic elements. All folders are named with key and bpm info, and you'll also find a folder of 16 MIDI basslines to use with your own synths and instruments.

VIDEO FEATURE //36MINS

//MASTERING EQ AND STEREO WIDTH

Size 337MB **Format** MP4 **Web** www.productionadvice.co.uk

Mastering engineer Ian Shepherd has been at the forefront of campaigning for better dynamic range in modern music, even designing his own plug-ins to help engineers achieve a better understanding of the dynamics in their mixes. We've got two videos aimed at helping you to craft better masters; the first looks at how to monitor, measure and modify the stereo width in your tracks, and the second at how you can use EQ to achieve louder-sounding masters without the need for excessive compression and limiting. You can find more information on prevailing in the loudness wars and Shepherd's mastering courses at the website.

//SOFTWARE

IKM AMPLITUBE 4 (WINDOWS, MAC OSX) →

The latest version of IK's guitar and bass tone studio recreates the entire signal chain from instrument to recording device. Features include speaker cabinet room, speaker model selection, 3D mic placement, new gear and effects, four-track looper and more. www.ikmultimedia.com



DEMO//SOFTWARE



← FXPANSION STROBE 2 (WINDOWS, MAC OSX)

An update on FXpansion's analogue modelled poly synth with a stunning effects section, revamped arpeggiator, deeper modulation, preset morphing, randomising and scalable vector interface for retina and 4K displays. www.fxpansion.com



DEMO//SOFTWARE

← SINEVIBES HOLOGRAM (MAC OSX)

A creative effects processor that analyses audio in real time, splits the signal into up to 64 bands, then recreates it with sine oscillators to create smooth synthetic tones. Also includes two modulators with nine waveforms. www.sinevib.es

IGNITE VST VICE ONE (WINDOWS, MAC OSX) →

A virtual analogue-style compressor inspired by hardware tube compressors, but based on a unique new design. The GUI includes standard compressor controls plus an Analog/Digital mode, VU meters and saturation. www.ignitevst.com

DEMO//SOFTWARE





FULL//SOFTWARE

←SOUND RADIX MUTEOMATIC (WINDOWS, MAC OSX)

A simple and elegant plug-in that automates the activation of a talkback or listen microphone channel according to your DAW's transport state, and displays it clearly so you know when to speak. www.soundradix.com

SAMPLE LOOPS//ROYALTY-FREE

//DUB, TRAP, TECH HOUSE AND MORE



Size 200MB **Format** 24-bit/44.1kHz WAV
Web www.loopmasters.com

We've got another bumper crop of royalty-free samples from Loopmasters for you to experiment with and use in your tracks. First up, to go with the reviews in the mini reviews section of the mag, we've got blistering beats and dark synths taken from the Histibe Neo Breakbeat pack, and rolling hats and vocal chops from Trap Takedown. You'll also find rolling breaks and heavy basses from Salaryman Drum and Bass Pulse 2, big main room beats and synth riffs from We House You and Future House & Tech and, finally, an array of horns, organs and dubbed out riffs taken from Dubwise 2. Use the code MUSICTECH10 for an exclusive discount at Loopmasters.com.



VIDEO TUTORIALS//69 MINS

//MASTERING WITH OZONE 7

Size 653MB **Format** MP4
Web www.pointblanklondon.com

With the latest version of Ozone, iZotope has added a bunch of new features and modules, and this month Point Blank Music School tutor and resident iZotope specialist Anthony Chapman takes an in-depth look at what you can expect to find. There are also three videos, with Chapman working his way through mastering a dance music track. The first looks at the new Vintage Tape module and also the Imager, the second looks at the Vintage Compressor and Vintage EQ, and the final video looks at clipping and limiting using the new Vintage Limiter.

VIDEO FEATURE//38 MINS

//NEURO RACKS & LIVE INSTRUMENTS

Size 456MB **Format** MOV **Web** www.loopmasters.com/loopplus

Loop+, the production blog from Loopmasters, has provided a bumper bundle of studio know how videos. First, producer Blandy (Ian Bland) guides us around the Beatdown Ableton drum sequencer from Sonic Faction, and Multiplier is back with a presentation about Synth Sequencer also from Sonic Faction. We have Dan Larsson's new Extreme Neuro Processing Racks For Ableton, which can turn simple presets into mega bass destructors. Finally, producer Davide Carbone looks at the REV X-Loops Contact engine from Output.



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